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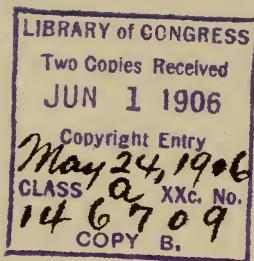
THE HEALTH-CARE OF THE BABY

THE
HEALTH-CARE OF THE BABY
A HANDBOOK
FOR
MOTHERS AND NURSES
BY
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NEW YORK AND LONDON
FUNK AND WAGNALLS COMPANY
1906



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Published, May, 1906

To
MY WIFE
THIS BOOK IS
MOST AFFECTIONATELY
DEDICATED

PREFACE

THERE are many details pertaining to ventilation, clothing, and bathing which every mother and nurse should know and which she should have in a condensed manual. The physician cannot always be at hand to answer the many details which the modern mother requires, most especially if she is out of town or if she is traveling. Suggestions and advice for infant feeding in health, and when the stomach and bowels are out of order, form the most important part of this little work. Directions for the management of fever, and a guide during such diseases as measles, croup, skin diseases, etc., are given. In cases of accidents, poisoning, etc., I have given ample advice to be followed until medical help can be procured. The correction of bad habits, and the management of rashes

have received careful consideration. Let me hope that the book will serve as a companion to the young mother and nurse for whose instruction it is intended. I desire to acknowledge my indebtedness to Miss Alice Haehnlen for many valuable suggestions.

NEW YORK, February, 1906.

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PART I

General Hygiene of the Infant

CHAPTER I

THE NURSERY

IF possible the nursery should be a large room having plenty of fresh air and sunlight. Everything in the nursery should be washable; the walls, if possible, should be painted instead of papered; the furniture should have no upholstering; the floor should be of hardwood, or closely boarded and covered with a few rugs that may be cleaned with a damp cloth.

A feather duster should never be allowed ^{Dusting.} in the room. Nothing should be allowed in the room that can not be dusted with a damp cloth. The screens should be covered with material that may be easily washed.

The windows should have no other hang- ^{The} _{Light.} ings than oil shades, of which there should be a green one and a white one at each window to regulate the light, which should be neither dull nor glaring. At night, to insure proper repose there should be no light. With the modern convenience of electricity, a small

green glass bulb can be used when a light is necessary. A wax candle will answer for all purposes at night if electric light can not be used.

The Bed.

A brass or iron bed without any hangings should be selected. The bed should be one having a good woven wire mattress; it is no matter if the knobs and scrolls are not fancy. On top of this wire mattress place a heavy blanket folded so as to fit the bed, or a hair mattress. (I prefer a blanket, as this can be unfolded and aired daily, and occasionally washed.)

Cover the mattress first with a rubber sheet, second a cotton sheet, third a quilted pad. On this pad the baby is laid and covered first with a cotton sheet, second with light-weight wool blankets and as many as are required for the temperature of the room. Down comforters may take the place of blankets, as they are much lighter in weight.

The pillow should be filled with hair, never with feathers or down, and should never be more than one inch high.

The blankets or comforters should be hung on the line for a good airing every few days. The bed should not be made as soon as the baby is taken up in the morning, but the bed-

clothes should be spread apart daily until thoroughly aired. Sheets or pads that have once been wet must be changed for fresh ones. Never put the baby in a cold bed, but see that the sheets are warmed by means of hot-water bags before the baby is placed there.

Fresh air is of almost as much importance ^{Ventila-}_{tion.} to the baby as food. That the giving of fresh air to the baby is sadly neglected for fear of "taking cold," can be seen in everyday life among the majority of people with whom we are brought in contact. A baby confined to a room with hot air is far more liable to catch cold when taken out of doors than one accustomed to be in a room having fresh, cool air. The nursery should be thoroughly ventilated at least twice a day. This can easily be done while the baby is taken out into the street or into another room. Fresh air should be admitted to the nursery from windows communicating with the street or yard. Air-shaft ventilation must never be permitted. If the nursery has an open fireplace fresh air can be admitted constantly. A windowboard may also be used to admit air constantly. This windowboard is a strip of wood five inches high and the width of the window. The lower sash is raised and the board in-

serted. This makes a space between the two window sashes through which the air can gradually enter the room.

Night
Air.

Night air is fresh air and should be admitted to the nursery. Children deprived of fresh air at night are more sensitive and hence contract cold in the head and "sniffles" more readily when taken out of doors. At night the nursery can be ventilated by having a window open in an adjoining room, or if the weather is not too cold, the window furthest from the baby's bed may be left open, and the screen properly placed to avoid any possible draught. Give the baby plenty of breathing room by placing the screen away from the bed, not tight up against the bed, as is so frequently done.

Heating
the
Nursery.

Most of our city houses and apartments are heated by means of a hot-air furnace or with steam heat. The best method of heating is by means of an open fire. Gas stoves should never be used in the nursery. If additional heat is necessary during the bath, an oil stove should be used.

The
Tempera-
ture.

During the day the temperature of the nursery should be between 65° and 70° F., never more. During the night it should never be over 65° F., and gradually reduced so that

when the baby is about one year old it will not be over 60° F.

The selection of a nurse-maid is not an easy ^{The Nurse- maid.} matter. That it is an important matter we can see when we consider cases of tuberculosis and syphilis that have been unquestionably transmitted by the nurse to the child. Do not select a nurse-maid who suffers with catarrh or throat trouble. If possible select a nurse-maid who has been trained in a hospital devoted to the care of infants. She should be a woman between twenty and forty years of age, one that is quiet, mild-mannered, and that does not "know everything." Experimental feeding, as frequently tried by the nurse, is responsible for more rickets and weak children than any other method of rearing children. The nurse-maid should wear a dress or uniform that may frequently be washed. She must take orders from the physician and mother. It is the mother's place to instruct the nurse-maid. A mother who is dependent on a nurse will find that fact to be a detriment to her child.

In selecting toys for the baby those made ^{Toys.} of ivory or rubber are to be preferred. Select the best quality of pure rubber and avoid those whose colors rub off. Avoid all "woolly

lambs" and "woolly dogs," as the baby is sure to get some of the fluff into his mouth, which will cause gastric disturbance. Wooden blocks that can be washed, not those covered with paper, should be given to the baby.

CHAPTER II

BATHING AND CARE OF THE NAVEL

BATHING

THE first bath given to the baby should The First Bath. be an oil or vaselin bath. Soon after the baby is born the body should be anointed with warm olive oil or warmed vaselin. This oil can be applied with a large cotton wad. By this means we can remove the cheesy covering, called vernix caseosa, with which the baby is born. The oil bath serves the double purpose of cleansing the skin and lubricating the body so that the chilling of the body is prevented. An oil bath should be given daily until the navel cord has dried and fallen off. This usually happens between the fourth and eighth days. The first tub bath may now be given. *Requisites for the Tub Bath are:* A warm room, temperature 70-72° F.; papier-maché bath-tub on a low table; a basin of fresh warm water; two soft sponges or wash cloths; two large soft towels; a bath thermometer with wooden case; olive oil soap

or Unna's superfatted soap; a powder shaker containing pure talcum powder; several toothpicks on which a little absorbent cotton is twisted; a soft brush and fine comb; a large flannel bathing apron.

The
Tempera-
ture of
Bath and
Room.

How to
Give the
Bath.

When giving the baby a bath, see that the temperature of the room is between 70-72° F. Place the tub where there is no possibility of a draught, or avoid draughts by means of screens. Never place the tub on the floor, but always on a low stand or table. For a very young infant have the temperature of the bath between 98-100° F. As the baby grows older, gradually lower the temperature so that when baby is one year old the temperature is between 85-90° F. Always use a bath thermometer, never guess at the temperature, as the water will feel very much warmer to the sensitive skin of the baby than to a hand accustomed to hot water. After everything is prepared for the bath, and the fresh clothing for the baby is warmed, tie on the large flannel bathing apron. Undress the baby and take him on your lap. Cover all but his head with the flannel apron. After bathing the face with the fresh water from the basin, soap the cloth and carefully wash the head and scalp. Dry the face and head thoroughly.

The entire body is now carefully bathed with soap and warm water from the basin. Keep the baby wrapped in the flannel apron as much as possible while this is being done. Now lift him gently into the fresh warm water in the bath-tub. Use a fresh cloth and thoroughly rinse off all soap. After remaining in the tub for two or three minutes he should be lifted out of the tub and placed on the warm towels which have been prepared on the bed. Wrap the towel around him and gently pat him dry. Use the second towel to dry all the little folds of flesh, under the arms, at the neck, between the thighs, etc. Lift the baby from the damp towel on to a dry blanket, rub him with alcohol, and dust a little talcum powder on the neck, behind the ears, under the arms and knees, in the groin and on the buttocks. Wipe away the superfluous powder as it will only irritate the skin, especially in the groin where it is likely to get wet and cake.

As baby grows older he may remain in his bath longer—from five to ten minutes, especially during the summer. After the morning bath he should receive a dash of cold water over his spine. This had better be given by means of a large sponge saturated in cold water. While the baby is still seated or

standing in the bath water, this saturated sponge should be held back of his head, the water squeezed out and allowed to run down his back. By the use of cold we contract the blood-vessels and prevent chilling of the surface. This plan is most admirably adapted for hardening the baby, thus preventing him from taking cold easily.

*The
Foreskin.*

If the baby is a boy the foreskin should be pushed back every day and the parts carefully washed with cotton and warm water, removing all white particles that may have collected there.

The Scalp.

The scalp need only be washed two or three times a week, unless it is covered with greasy scales (milk crust) as is quite common; then it should be washed every day and anointed with a little melted cocoa butter. If these greasy scales persist, the physician should be consulted. Be very careful when washing the scalp or removing these scales, as the fontanel or "soft spot" on the top of the head is open. Do not rub over this spot roughly or allow anything to fall on it or strike it.

*To Clean
the Nose
and Ears.*

After baby is dressed his nose and ears should be cleaned by means of wooden toothpicks on which a little absorbent cotton

is twisted, care being taken to see that the end is well covered. Dip the covered end of one of these toothpicks into a solution of boric acid and insert into the nose; by gently moving it around the nostril remove as much of the secretion as possible. Clean the ears in the same manner, but use a freshly mounted toothpick for each ear and nostril.

Boric acid solution for the baby's toilet is made by adding a teaspoonful of boric acid powder to a pint of boiling water, or can be bought from the druggist by asking for a two per cent. solution of boric acid.

Baby should receive a daily washing of his <sup>Care of
the Mouth.</sup> mouth with a weak solution of boric acid. This can be done by wrapping a piece of absorbent cotton around a toothpick or the little finger. Dip this into the boric acid solution and gently go over the baby's gums, cheeks, tongue and roof of the mouth.

When the teeth are present they should be <sup>Care of
the Teeth.</sup> kept clean. Neglect of the teeth will result in caries and foul breath; particles of milk sometimes remain between the teeth, turn acid, and so destroy the enamel of the teeth. Baby's teeth are best cleaned by means of a small piece of cotton dipped in a weak solution of listerine and water. The teeth of older chil-

dren may be cleaned with a slice of lemon or lemon juice applied with cotton.

The Eyes. To cleanse the eye dip a small pledge of cotton into a two per cent. boric acid solution. Hold this cotton near the eye and squeeze the cotton, letting a little of the solution fall on the eyelid. Let it remain for a few moments; do not attempt to open the eye as the solution will trickle there itself; wipe, but do not rub, the eye gently toward the nose with a dry piece of cotton, using a fresh piece of cotton for each eye.

The Nails and Hair. If it is necessary to shorten the nails they should be cut, not bitten, off before the baby is bathed. After the bath any remaining foreign matter under the nails may be removed with a wet toothpick.

The hair should be brushed with a soft camel's hair brush.

When to Bathe the Baby. It is well to give the bath just before putting the baby to bed and before the evening feeding. It makes him sleep better and there is no danger of his catching cold by being carried about. Never give a bath directly after a meal or just before the baby is to be taken out. In the morning one hour after his feeding he may have a sponge bath. During the summer months the baby may have a

tub bath (one minute dip) in the morning in addition to his evening tub bath. There are four channels by which impurities can be removed from the body; they are: 1. The skin; 2. The kidneys; 3. The intestines; 4. The lungs.

To remove impurities through the skin, the pores of the skin must be kept open. This can only be attained by bathing. Besides cleansing the skin the bath exerts a very soothing influence on the nerves. Very nervous children will appear more calm after a bath, so that children who are restless at night will be strengthened and soothed by this simple means.

If the baby's skin shows a tendency to be red and chafed then it is advisable to use no soap at all, but an ordinary bath or an oatmeal bath made in the following manner will be found advantageous:

Take between one and two pounds of oatmeal and sew it into a bag made of cheese-cloth. Place this bag in the baby's bath-tub; let it soak in hot water for about one half hour, and then add enough water to bathe the baby. The duration of the bath should be from five to ten minutes; the temperature of bath 95° F.

Why Baby
Should
Have a
Bath
Daily.

Sensitive
Skin.

Oatmeal
Bath.

When to
Stop
Bathing.

Do not bathe the baby if he has an eczema or a very reddened skin. (Read also the article on Eczema on a later page.) Do not bathe him if an eruption is present, unless the eruption is due to an irritation applied to the skin. Turpentine, mustard, and camphorated oil, when rubbed into the skin, will cause an eruption resembling scarlet fever. Under such conditions the bath may be used. When fever develops the bath may be continued, provided there is no eruptive disease like measles or scarlet fever. When baby has a cough or catarrhal manifestations, it is advisable to discontinue the bath for a few days.

CARE OF THE NAVEL

The nurse in charge of the baby must thoroughly wash her hands and clean her nails before touching the cord.

At Birth.

Dry dressings only should be used. The cord should be dusted with pure talcum powder and wrapped in several thicknesses of sterilized cheesecloth or clean, soft linen. A clean dressing should be renewed daily until the cord falls off.

After the
Cord Falls
Off.

Sprinkle some talcum powder into the navel and cover it with several layers of cheese-

cloth or linen, over which apply the belly-band.

If proper cleanliness has not been observed, ^{Sore} _{Navel.} then inflammation of the navel will result. If such is the case, the skin surrounding the navel will appear reddened and an oozing or discharge of pus follows. The physician's attention must be directed to this condition, the neglect of which may sometimes result in blood-poisoning.

When baby strains very hard to have a ^{Rupture} _{of the} Navel. movement of the bowels a rupture of the navel sometimes follows. This protruding mass feels soft, and a distinct gurgling sound can be heard when it is replaced or pushed back by the finger. Straining during constipation or straining during continued diarrhea may cause this condition. Violent coughing spells such as occur in whooping-cough may also cause this rupture. A snug-fitting abdominal binder evenly placed will support the abdomen and hold this rupture in place. It is best to consult the physician the moment the rupture is noticed. Until then a strip of zinc oxide adhesive plaster $1\frac{1}{2}$ inches in width should be tightly drawn around the body covering the rupture.

CHAPTER III

CLOTHING

THE new-born baby requires the following clothing: During the day, a flannel band; a diaper; socks; a long-sleeved shirt; a flannel pinning blanket; a white dress. At night, a flannel band; a long-sleeved shirt; a diaper; a flannel night-dress.

The
Flannel
Band.

The flannel band should be long enough to reach twice around the baby's body and should never be more than four inches in width. It will interfere with the breathing if brought up too high. It should have no seams or hems to cause uneven pressure, as it must fit snug, but not too tight. This band should always be closed on the left side; whenever possible it should be closed by basting with needle and thread. If the baby is restless and this can not always be done, then it may be fastened by using four of the smallest size safety pins.

The Knit
Band.

This flannel band should usually be discarded after the baby reaches the age of three

months. When this band is discarded, a knit silk and wool band should be used in its place. This band is held in position by means of shoulder straps.

The diaper should be made of soft bird's-^{The} eye cotton. For a very young baby it should be made about eighteen inches square and folded but once. Knitted diapers are light, porous and elastic and yield to all strains and motions of the body; they can be bought in the stores. I especially recommend them for children after they are placed in the sitting position.

Never place a small folded diaper inside of the regular diaper; this would cause too much thickness between the baby's legs, and may cause the legs to assume a bowed appearance, especially if the bones are soft and bend easily. The baby should never have more than two thicknesses of cloth between his legs. To protect the skirts from the excess of urine, a quilted diaper pad about twelve ^{Quilted} inches square can be laid directly under the ^{Diaper} ^{Pad} baby after he is diapered, and the skirts then arranged over this pad. This pad should never be tied by means of strings around the baby's waist as is so often seen, as this brings the weight on the hips. By careful handling

the pad will remain in position when the baby is taken in arms. Never resort to a rubber diaper, for sanitary reasons.

The diaper once wet must never be dried and used again, for unless the baby is perfectly normal the urine may contain substances which will irritate the buttocks and thighs, thus causing redness and chafing. At times eczema will result from constant irritation. All diapers once used should be placed in a covered pail and washed and boiled as soon as possible. They should be dried in the open air and sun, never in or near the nursery.

*The
Shirt.*

Over the band a gauze or light-weight silk and wool shirt with high neck and long sleeves is worn in summer, a second weight silk and wool shirt in spring and fall, and a third or heavier weight in winter. The fourth or very heavy weight shirts found in our stores should never be used in our climate. Silk and wool shirts should be used because they are light in weight and wash well. Woolen materials shrink and become hard in washing. A combination of silk and wool, no matter how often washed, remains soft, retains its original size and shape and gives freedom with every motion of the baby's body.

Next comes the pinning blanket. This is ^{The} ^{Pinning} ^{Blanket.} always made of light-weight flannel, and made after the regular skirt pattern, only that it is left open in the back the full length of the skirt, thus making it more convenient in handling the baby, changing the diaper, etc. This pinning blanket may also be modeled after the popular "Gertrude" pattern. After the pinning blanket is closed, the skirt part is folded, and turned up at the bottom and pinned with several safety pins, so as to reach just above the hem of the dress. This will keep the cool air from the baby's feet and at the same time give him plenty of room to kick or move his limbs.

When baby is put into short clothes, about ^{The} ^{Flannel} ^{Skirt.} the age of five months, a short flannel skirt, on a flannel body in winter, on a cotton body in summer, takes the place of the pinning blanket. Over the flannel petticoat mothers usually insist on putting a white petticoat because it "looks better." This is not necessary and only adds more weight to the baby's clothes.

The dress, skirts, and band are slipped over ^{The} ^{Dress.} the infant's feet, never over its head. On cold days the baby should wear a dress of flannel or a flannel or cashmere sack over the

white dress. The baby's clothes should be made plain, avoiding all ruffles, plaiting, and useless trimmings; allow [only enough fullness for comfort; select fine, soft materials, and when trimming is considered indispensable, use laces instead of embroideries.

Blankets and Wrappers. It is advisable to have several light woolen wrappers which can be quickly slipped on the baby whenever necessary. Knitted wool blankets are more serviceable than the bought woolen blankets for wrapping baby, as they are light in weight and can be more easily washed, more quickly dried and remain softer than the woven blankets.

The Socks and Shoes. The feet should be covered with very closely knitted silk and wool socks. When the clothes are shortened soft moccasins or kid shoes and merino or silk and wool stockings take the place of the woolen socks or booties.

The Ankle Support. When the baby is able to stand on his feet and shows signs of taking the first steps, a shoe with a flat, broad sole should be made to fit the individual child's foot as accurately as possible. An inside ankle support should be fitted into the shoe. Another shoe that answers the same purpose is made with whalebones fitted at the sides. Laced shoes are

preferred to buttoned ones as they can be made to fit the foot better.

The baby's clothes should be shortened when he begins to kick or show signs of wanting to use his limbs—this is about the fifth month. It is not wise to make this change during cold weather. If the baby is born in July it is better to shorten the clothes in October, the beginning of the fourth month, rather than wait until November and make the change during very cold weather.

The baby should always be dressed while lying on his back on a soft bed or a pillow. Very little or no turning of the baby is necessary. The band, as said before, may be slipped over the feet, the body gently raised by grasping the feet, the arms slipped through the shoulder straps and the band then slips into place without turning the baby. The skirts and dress are laid together and slipped over the legs at the same time; after the sleeves are gently worked over the arms the baby is turned on the right side and the skirts and dress are closed. If a sack is required the left arm can be slipped into the sleeve while the baby is still on the right side; one more turning of the baby to the left side will permit the right arm to be slipped into the right sleeve.

When
Com-
fortably
Dressed.

When the baby has on the right amount of clothing his limbs will be pink or the skin mottled. They should not be bluish, as they usually are when the baby is not dressed warm enough. In special cases, where, for example, heart disease exists, continued blueness of the limbs is found. Such cases require careful medical supervision.

When too
Warmly
Dressed.

When the baby is too warmly dressed perspiration will result. This has a weakening effect, besides producing a sensitive skin, which means less resistance and a liability to take cold easily.

Night
Clothing.

A baby under twelve months is put to bed with a shirt, a diaper, and a flannel or flannellette nightdress, which is made long enough to allow the hem to be gathered on a drawing-string. This will insure the baby's feet being covered even though the outer covering be kicked off.

After the baby discards the diaper at night, night-drawers, which will be found more serviceable and comfortable, may be worn. These can be made of canton flannel or can be bought made of stockinette.

Street
Clothing.

When the baby goes out-of-doors he needs, in addition to the regular house clothes, a long woolen or wool-lined coat with shoulder

cape as an extra protection; a silk cap with heavy lining; woolen mittens; a lace veil (bobbinet), which may be worn on very windy days or when asleep in the carriage. A woolen veil should never be worn, as there is danger of the baby swallowing some of the fluff. After the baby is in short clothes leggings will be necessary in cold weather. During the summer a piqué coat and a thin lace cap are all that is necessary.

CHAPTER IV

DEVELOPMENT AND GROWTH

THE average height of the new-born male is from $19\frac{1}{2}$ to 20 inches (about 50 centimeters); of the female from $19\frac{1}{4}$ to $19\frac{3}{4}$ inches (about 48.5 centimeters). A child grows most rapidly during its first year. The increase during the first year is 5 to $6\frac{1}{2}$ inches; second year, $2\frac{1}{2}$ to $3\frac{1}{2}$ inches; third year, $2\frac{1}{3}$ to $2\frac{2}{3}$ inches; fourth year, about 2 inches; fifth to sixteenth year annual increase from $1\frac{1}{2}$ to 2 inches; sixteenth to seventeenth year, $1\frac{1}{2}$ inches; seventeenth to twentieth year, 1 inch yearly.

Diseases of the bones, rickets, and scrofula retard growth. A child should begin to walk at the end of twelve months. If a child when beginning to walk uses chiefly its toes and has a limping gait, more especially if symptoms of pain be noticed in one knee, and tenderness be caused by handling the limb, the physician should be consulted.

The growth of hair seen on the baby's head at birth usually falls out during the first three

or four weeks of life, and then a new growth gradually takes its place. This hair is light in color, but usually becomes darker as the baby grows older.

During the second month the baby shows signs of intelligence. This is the time when the mother and nurse think it necessary to entertain the baby, but this gives more pleasure to the mother than to the baby, whose nervous system is very delicate. The brain is very active during the first year of life and therefore requires rest and quiet. During the third and fourth months the baby learns to hold up his head if his back is supported. He will learn to recognize his mother and he begins to smile and "coo." The first tears are usually seen during the third month. During the fourth month the baby begins to notice his toys. The salivary glands become active and drooling begins. During the sixth month he tries to sit up unsupported. This should not be encouraged or allowed until the seventh month and then only for a few moments at a time. During the seventh month the first tooth usually appears. During the ninth and tenth months the baby attempts to lift himself up on his feet, and during the tenth and eleventh months he is able

to stand with assistance. The first attempts at walking are generally made during the twelfth month, and at fourteen or fifteen months the baby as a rule is able to walk very well alone. The baby should never be encouraged to walk; he will walk of his own accord when his muscles and bones are strong enough to support him. He begins to talk about the twelfth month, his first words usually being Mamma and Papa. The fontanel or "soft spot" in the baby's head should be completely closed by the end of the eighteenth month.

Very
Late
Speaking.

The center of speech may be inactive and show no signs of development until the end of the second year. If the child is otherwise healthy, no alarm need be felt at this state of affairs. If, however, the child is backward in its physical development, as well as its mental development, then treatment must be sought to remedy this condition.

Sudden
Loss of
Speech.

If an infant showing proper development begins to speak, and for no apparent reason then stops speaking, the cause of the condition should be carefully investigated. A child suffering from a severe infectious disease, like diphtheria, may during convalescence, develop paralysis, which might cause the sud-

den cessation of speech. The neglect of treatment at such a time may result in permanent injury to the child.

The baby should be weighed at regular ^{When to Weigh.} intervals. Nothing else tells so accurately whether or no he is thriving. For the first year the baby should be weighed every week. During the second year, every two or four weeks will be sufficient. The best time to weigh the baby is when he is undressed, just before his bath.

He should be weighed in the same scales ^{How to Weigh.} each time. The scales must be accurate. Scoop scales are best adapted for young infants. When weighing the baby undress him, and wrap him in a small blanket and place him in the scoop of the scales; balance the scales and note the amount; then remove the baby and after dressing him, weigh the blanket in which he was wrapped; deduct the weight of the blanket from the total and the remainder will be the weight of the baby.

The average healthy baby weighs from ^{Normal Gain.} seven to seven and one-half pounds at birth. A few ounces are generally lost during the first week. These are made up during the second week and then the baby should gain at the rate of four to eight ounces each week

up to the sixth month. The gain from the sixth to the twelfth month is less, usually from two to four ounces a week.

A healthy baby properly fed does not lose in weight. There are times when the baby will gain very slightly and probably for a few weeks not at all, and still be in a healthy condition. During the teething period and during very hot weather the baby as a rule gains very little in weight.

Age.	Weight in Pounds.
Weight at birth.....	7 $\frac{1}{2}$
Weight at 1 month	9
Weight at 2 months	11 $\frac{1}{4}$
Weight at 3 months	12 $\frac{1}{2}$
Weight at 4 months	13 $\frac{3}{4}$
Weight at 5 months	15
Weight at 6 months	16 $\frac{1}{4}$
Weight at 7 months	17 $\frac{1}{2}$
Weight at 8 months	18 $\frac{1}{4}$
Weight at 9 months	19
Weight at 10 months	19 $\frac{3}{4}$
Weight at 11 months	20 $\frac{1}{4}$
Weight at end of 1 year	21

Some babies fed on prepared infant foods or those foods containing a great deal of starch, will gain rapidly in weight.

A normal baby usually doubles its weight at the end of the fifth month, and by the end of the first year weighs three times its weight at birth. Taking seven pounds as the average

weight for an infant at birth, it should weigh fourteen pounds at the end of the fifth month and twenty-one pounds at the end of the first year. The table opposite shows the gain in weight of a healthy baby that was fed at the breast.

For exercise, place baby on the bed, loosen his skirts and allow him to kick for fifteen or twenty minutes. Turn him over on his stomach and let him kick in this position—this may be done twice a day. His clothing should be loose enough to permit him to use his arms and legs freely. He gets exercise while in his bath, kicking his legs and moving his arms. A cool sponge bath of the body chills the surface and causes the baby to draw long breaths; this expands the lungs and is the best form of pulmonary gymnastics. When the baby cries from temper let him alone—his lungs are exercised by crying.

When carrying the baby change him from one arm to the other so that he may learn to use and exercise both arms equally.

When the baby is six months old place him ^{Creeping.} on a large, clean rug and permit him to roll and creep at will. This exercise requires no regulation except precautions against dangerous places.

Walking.

Do not put the baby on his feet. When he can pull himself up on his feet by his own effort, it will be time to encourage him to make the effort to stand and walk. Later on, walking will be the best out-door exercise.

Baby's
First
Outings.

If the baby is born in summer and perfectly normal, he should be given his first outing when eight or ten days old. If born in winter he must be gradually accustomed to out-door life. This is best done by dressing him in cap and coat in addition to his house clothes and placing him in his carriage in the nursery. Open the windows from the top, close all doors so there is no draught and wheel the baby back and forth for an hour or more. This method of giving fresh air can also be employed when the baby is older and the streets are wet or when very sharp winds are blowing. When the baby is two months old, he may be taken out in dry, cold weather. Begin by letting him stay out for an hour or two in the warmest part of the day. Gradually increase the length of time from week to week until the baby is accustomed to out-door air, when he can remain for several hours at a time each nice, dry day. In summer the baby may remain out doors until 5

o'clock and in the winter until 3 o'clock if the air is clear and dry.

In summer the baby should be taken into the house or in the shade during the hottest part of the day, from 12 noon to 3 P. M.

Select a carriage that is strongly built, that has good springs, wheels with rubber tires, and a top that can be made to fit tightly about the head of the carriage. This top is especially valuable in winter, as it keeps off all winds. Separate tops of linen can be bought for use during the summer. These tops, whenever possible, should be lined in green, as this color is the least trying to the baby's eyes. In winter the carriage should contain a hair pillow covering the bottom of the carriage and another small, flat, hair pillow for the baby's head. Over the pillow should be placed a knit wool blanket. The baby should be placed on this blanket which then should be carefully wrapped around him. Another wool blanket or afghan should be placed over the baby and tucked well in at the sides and foot of the carriage. Over this a fur robe should be placed in very cold weather. In summer cotton covers take the place of the wool blankets. When the baby is still very young it is better for the nurse to stay on

The Carriage.

one block so as to avoid jars at crossings or curbs. When it is necessary to take the carriage over curbs, the hind wheels should be gently let down first. This avoids that sudden forward jar of the baby and leaves him in a comfortable position.

As the baby grows older and is able to sit up, or about the ninth month, the seats which are bought with the carriage may be used and arranged so as to give him the proper position.

Feeding
in the
Carriage.

The best place to feed the baby is in the house, although I frequently permit a baby to be fed, in the carriage, out of doors during the summer.

Sleeping
in the
Carriage.

There is no objection to the baby's sleeping when in the street. There is no more danger of his taking cold while asleep than when awake. We invariably find those children who sleep out of doors less prone to take cold. See that baby is dressed warm and placed in the sunshine with his face and eyes protected from the sun and wind, and he will sleep with comfort and advantage.

CHAPTER V

PROPER TRAINING

FROM earliest infancy it is advisable to ~~resting.~~ train the baby. He should be given the breast, and after nursing or feeding from the bottle, be laid in his bed. If this habit is begun early a regular habit of resting can be formed.

When baby is three months old he can be ^{The Bowels.} taught to use the commode. He should be placed on a small chamber held in the nurse's lap. As he grows older and strong enough to support his back he may be placed on his chair or commode. The best time to have baby's bowels move is in the evening before his bath or evening feeding. As baby grows older his bowels will move with less effort after his feeding, but this should not be encouraged while he is young, as he is liable to regurgitate his food. If baby makes no attempt to move his bowels when placed on the commode, then a small soap stick, or a gluten or glycerin suppository, should be inserted

into the rectum. By this means we direct the baby's attention to the reason of his being placed on the vessel. Such treatment may be repeated daily for weeks or until baby's bowels move unaided.

Sanitary
Nursery
Seat.

Each child should have his own vessel or his own seat as a sanitary measure. These sanitary wooden seats can be bought at any of the large department stores of New York City. They can be laid on any vessel and prevent the child's body from coming in contact with the vessel. As they are small in size they are adapted for the young infant as well as the older child.

The
Bladder.

What is possible with the bowels can be accomplished with the bladder. If the mother or nurse will place the infant on a vessel every three or four hours he will gradually learn to hold his urine until such time. He should be placed on the vessel immediately on awakening, be it night or day. Children invariably empty the bladder on awakening.

Normal
Move-
ments.

At birth, the baby may normally have from three to four movements in twenty-four hours. As he grows older one or two movements a day will be sufficient. While the baby is fed on a milk diet his stool should be yellowish in color, smeary or pasty-like in consistency, and

the smell should be acid, but not disagreeable. As soon as an exclusive diet is changed to a mixed diet, the stools lose the yellow color and become darker, and resemble more those of an adult, though remaining softer and thinner throughout infancy.

Mucus is always present in all healthy stools, but is so well mixed that it does not appear as mucus to the naked eye. Any appearance, therefore, of mucus easily visible should be regarded as abnormal.

Abnormal stools requiring treatment are these: Greenish stools resembling spinach; greenish stools containing small, white particles; brownish stools having a very offensive odor; thin, brownish stools resembling muddy water, passed with considerable flatus (gas); dry, white or light gray stools; stools with jelly-like masses or long shreds of mucus; stools passed in hard, dry balls; stools mixed with blood.

To develop an infant's brain the nervous system requires quiet but cheerful surroundings. Useless excitement is harmful. To take the baby and handle him like a toy is wrong. I have seen infants taken up from a sound sleep to display the "talent" that some one has taught them. Nothing is more harm-

ful than to have the mother compel her infant to display various tricks during its feeding. While this is a gratification to the friends, it certainly is detrimental to the infant's brain and nervous system.

Crying.

A certain amount of crying is necessary for the baby if he is to be healthy and strong, for this is the way he exercises his lungs and sends the blood to the extremities.

This normal cry is loud and strong and baby may indulge in it frequently; even though he gets red in the face this cry is healthful. A careful and observing mother will soon learn to know this cry from the cry of pain, hunger or discomfort.

Causes.

The baby may cry because he is hungry, or thirsty; his napkin may be wet; he may be frightened or sleepy; his clothing may be uncomfortable; he may be tired lying in one position, or he may be crying from temper and want to be indulged.

When the baby cries see that he is comfortable, that the napkin is not wet, that the hands and feet are warm, that the clothes are smooth under him, that no pins are pricking him and change his position.

Due to Colic.

If he is crying from colic the cry is strong, sharp, and spasmodic and often accompanied

by a drawing up of the legs and a contraction of the features.

The cry from earache is a continuous whine ^{Due to Earache.} and often the hand is brought toward the head.

The cry of hunger is a continuous fretful ^{Due to Hunger.} sound, heard soon after feeding or some time before the next meal is due, and is usually accompanied by the sucking of the thumb or fingers.

When the baby is very ill or weak the cry ^{Due to Illness.} will be low or moaning.

The cry of temper is loud and strong and is accompanied by kicking and stiffening of the body. It can easily be distinguished from other cries, for when baby gets what he wants he immediately stops. This cry of temper should never be given in to or the mother will regret it later on. The training can not begin too early. When the baby cries from fright he should be taken up and comforted and as soon as quieted put back on his bed again.

When the baby cries and all causes but temper have been eliminated, then let him "cry it out," even if he cries an hour. The second struggle will not last so long. The third will be still shorter. If the abdominal

band is properly applied no rupture can result from this crying.

In cases of habitual crying it is better to get the opinion of a physician as to the cause before subjecting the baby to too rigid discipline.

Sleep.

A new-born baby sleeps about nine-tenths of the time. The sleeping time gradually diminishes and when the baby is five months old he usually sleeps all night and requires a long nap of two or three hours in the morning, and another of about one hour in the afternoon. The healthy baby sleeps with his mouth closed, the nostrils can be seen dilating gently and the chest moving slightly and regularly. The baby should never perspire while sleeping but the skin should remain warm.

Proper Training.

The baby should be put to bed while awake. He should first be fed, made comfortable and the room should be darkened. He should neither be rocked nor sung to sleep; if left to himself will soon learn to fall asleep quietly. He should be put to bed no later than six o'clock, and should continue his afternoon nap until four years old or longer.

Causes of Disturbed Sleep.

Disturbed sleep or sleeplessness is usually caused by improper feeding, and in the bottle-fed infant by over-feeding or too frequent

feeding. Intestinal indigestion and colic are the most frequent causes. Discover the cause and remove the disturbance yourself if possible; failing to do so consult a physician, as the trouble may be due to large tonsils, adenoids, spine or hip disease, chronic joint pains, earache or toothache. See that the baby's feet are warm. Do not give him too much clothing. Give him plenty of fresh air in the room. Do not excite him with a new toy or romping play, and do not arouse fear before putting him to bed. Do not use soothing sirups or other medicines.

When the baby is put to sleep his hands must always be outside of the blanket or bed clothing. Bad habits are easily acquired, especially so if the genital parts are unclean. Any itching may cause a desire to scratch, later on, this may lead to constant fumbling and if this latter is not corrected we may find that our baby is addicted to one of the worst habits found in infants or children—namely, masturbation.

CHAPTER VI

VACCINATION AND DENTITION (TEETHING)

TO prevent a child from taking smallpox it should be vaccinated. All infants over two months old may be vaccinated. If smallpox exists in a locality or if an infant has been exposed, he should be vaccinated immediately.

No mother or nurse should attempt to vaccinate a baby; a physician should always be called. With care and cleanliness there is little or no danger of complication; on the other hand if the slightest amount of dirt from a finger nail or any other contamination is introduced into the wound, a child may contract erysipelas, which may lead to blood-poisoning and death. Five to seven days after vaccination, inflammation or redness around the vaccinated area will be noticed. This is the natural course "of taking." If this redness spreads and the skin is swollen and tense the physician will usually prescribe a cool, moist dressing of lead water or a one

per cent. boric acid solution. The reddened surface is to be covered with gauze moistened with one of these solutions until the inflammation subsides; this usually takes two or three days.

When the baby is about four months old ^{Drooling.} the flow of saliva usually begins, or is very much increased, so that a bib must be provided. This "slobbering," as it is familiarly called, is not a sign that the teeth are trying to push their way through the gums, but simply signalizes the development of the salivary glands and the further development of the function of digestion.

Many mothers and nurses regard the teeth- ^{Dentition.} ing period as a time to be dreaded and a time when the baby is sure to be sick. This is a mistake. It is perfectly natural for the baby to have teeth and there is nothing whatsoever to fear from the process. In a normal baby the teeth usually appear between the seventh and tenth months. The first teeth are known as the milk teeth and are twenty in number. The following table will show the usual rule followed by normal dentition in the average baby:

19	11	13	5	3	4	6	14	9	17
20	12	15	7	1	2	8	16	10	18

1 and 2 are the lower incisors, usually first teeth; then follow 3 and 4, the upper incisors. Normal children usually teeth in pairs and not singly, whereas rachitic children usually have an eruption of single teeth. As a rule there is a lapse of from three to twelve weeks between the appearance of each group. Some infants do not show teeth before the end of the first year. This is usually due to the fact that they are not well nourished. The physician should be consulted for a change of diet. Infants reared by bottle-feeding do not cut teeth as early as those nourished by healthy breast-milk, although rachitic infants sometimes teeth very early.

The restlessness, loss of appetite, slight fever and putting of fingers in the mouth so frequently attributed to teething, are more often due to faulty feeding. When the gums are very red and swollen and baby seems really to suffer, ask the doctor to examine the gums and he will order a cooling lotion or lance the gums if necessary. A pledget of cotton wrapped in a piece of clean linen and dipped in a solution of listerine and water (1 part of listerine to 25 parts of water) if laid on the baby's gums is very soothing. Frequent sips of cool water are comforting to the baby if

the gums are hot. If the baby is comforted by biting on a hard substance, a piece of zwieback is preferable to the rubber or ivory ring so commonly used. If the baby's vitality seems lowered during the teething period, which is shown by slight fever, restlessness, undigested food in the stools or vomiting, then a weaker food should be given. If the baby is breast-fed give him one or two ounces of filtered water before each nursing and reduce the length of nursing five minutes. If bottle-fed, take from each bottle one or two ounces of milk and add the same amount of filtered water. When all signs of restlessness have disappeared the food can gradually be strengthened. The milk teeth remain until the child is about six years old, when the permanent teeth appear.

PART II

Infant Feeding

CHAPTER I

GENERAL FEEDING

EACH baby is a law unto itself, and its individual wants must be studied. One baby will gain on the same mixture on which another will lose weight. The proof of the proper assimilation of food in any and every infant will be the following: An infant must appear satisfied after taking its bottle. There should be no vomiting or severe colicky pains. The bowels must move (unaided) at least once or twice in every twenty-four hours. The stools should be yellowish-white, and medium soft. The infant should sleep from four to eight hours during the night without awakening.

The weight must be taken regularly once a week. If an infant thrives it should gain from four to eight ounces every week, until the sixth month after which time it should gain from two to four ounces each week. If the weight shows no increase by all means con-

sult your physician that he may give more substantial food.

The natural method of feeding a baby is by means of the human breast. If this were not so then every woman would simply pass through her period of pregnancy and the breasts would not secrete milk. Breast milk contains in addition to nourishment certain antitoxic bodies. These substances usually prevent a child from taking the acute infectious diseases. To produce this immunity from disease is in itself sufficient compensation for the arduous duties demanded of a nursing mother.

There are times when the breast milk is deficient in quantity. At such times we should always make use of what little breast milk is present and supply the deficiency by giving the bottle.

Water.

Every child, young or old, must receive water several times a day. It will aid materially in clearing the mouth and gums and in quenching thirst. An infant up to the first month should receive several teaspoonfuls of plain filtered water either immediately after nursing or feeding or as soon after feeding as possible. It is not necessary to awaken the child in order to give it a drink. If it is

not time for feeding and the infant is restless, a few spoonfuls of cool water will frequently quiet it. When we desire to modify constipation, then water will be a most important factor, especially so when large, cheesy curds are found in the stool.

CHAPTER II

BREAST FEEDING

THE first three or four days after birth require special feeding methods:

The first substance secreted in the breasts is known as colostrum. This is thinner than milk and very scant. The exhaustion of the mother beside the normal deficient quantity of food in the breasts, demands long intervals of rest; thus for the first three days putting the baby to the breast once every three to six hours would be sufficient. If, however, the supply of milk is ample then we can follow the table on page 53 and feed the baby every two hours.

Interval
During
Day.

During the first month the baby should be fed every two hours during the day, never oftener; and during the second month every two and one-half to three hours. The baby may be taken from his sleep during the day to be nursed.

Do not disturb the baby from his sleep at night to be nursed. Let him rest as long as

From Birth Until 1 Month Old.	At 1 Month Until 2 Months Old.	2 to 4 Months Old.	4 to 6 Months Old.	6 to 9 Months Old.	9 Months Until 1 year Old.
6 A. M.	6 A. M.	6 A. M.	6 A. M.	6 A. M.	6 A. M.
8 A. M.	8 A. M.	8:30 A. M.	9 A. M.	9:30 A. M.	10 A. M.
10 A. M.	10 A. M.	11 A. M.	12 Noon	1 P. M.	2 P. M.
12 Noon	12 Noon	1:30 P. M.	3 P. M.	4:30 P. M.	6 P. M.
2 P. M.	2 P. M.	4 P. M.	6 P. M.	8 P. M.	10 P. M.
4 P. M.	4 P. M.	6:30 P. M.	9 P. M.	12 Mid-night.	
6 P. M.	6 P. M.		12 Mid-night.		
8 P. M.	8 P. M.				
10 P. M.	12 Mid-night.				
12 Mid-night.	3 A. M.				
2 A. M.					

he appears satisfied. This applies to healthy infants only. In sickness special feeding rules are required. If the baby thrives and gains in weight, it is better for both mother and baby to have an interval of rest and skip a nursing or two after midnight. If the baby is restless during this interval, change his position and give him one or two teaspoonfuls of boiled water.

The mother or wet-nurse should always sit upright while nursing the baby, be it at night or during the day. If the baby is nursing from the left breast, he should be held on the left arm while the right hand presses the breast away from the baby's nose, but without pulling the nipple from his mouth. This will give him plenty of air to breathe so that he must not let go of the nipple to breathe.

How to Hold the Baby While Nursing.

When there is nasal obstruction such as catarrh, or when post-nasal obstruction exists, such as adenoids, then an infant will let go of the nipple in order to draw a breath.

Length
of Nursing
Act.

No infant should nurse longer than twenty minutes, whereas frequently ten or fifteen minutes will suffice. Do not allow the baby to fall asleep while nursing. If this is allowed he will not get all the nourishment he should have. Light taps on the cheek of the baby will waken him, or the withdrawal of the nipple from his mouth will frequently arouse him to continue nursing. If, however, he will not renew his nursing, and has already nursed ten minutes, then the sleep should not be disturbed.

Do not allow him to take his meal too rapidly as he is liable to have an attack of hiccup or to regurgitate his food. If the baby nurses too rapidly withdraw the nipple from his mouth for a few seconds. This may be done every three or four minutes.

As a rule the baby should nurse from but one breast at each meal, if, however, there is not enough milk in one breast, then both breasts may be given.

Diet of a
Nursing
Woman.

A nursing woman should have three meals a day. These meals should be simple but

nutritious and mostly liquid. Meat should be taken only once a day. Milk, eggs, cereals and soups should form the principal part of the diet. For thirst, cool, filtered water or alkaline waters, like seltzer or apollinaris, should be taken.

If the milk is scanty, the flow can be stimulated by drinking a cup of hot broth, weak tea, cocoa, milk or gruel several minutes before putting baby to the breast. *Foods to be avoided by a nursing woman, are:* Onions, garlic, cabbage, ethereal oils and sour fruits.

The return of menstruation is no contraindication to the continuation of nursing. In nearly all cases the quality of milk will be affected to such a degree as to cause slight disturbances of digestion, such as restlessness or colic, or some bowel derangement. If the baby continues to gain in weight nursing may be continued. If there is too much disturbance, diluted cows' milk should be given during the first two or three days of menstruation.

No woman should attempt to nurse a baby who is not sure of her physical condition. Tuberculosis, hereditary nervous troubles, epilepsy, syphilis and all chronic disorders and diseases would prevent proper nursing.

CHAPTER III

WEANING

BY weaning a breast-fed baby we mean gradually taking from him the breast-milk by which he has been nourished since birth, and giving him cows' milk and other forms of nourishment.

By weaning a bottle-fed baby we mean gradually substituting for all cows' milk other nourishment such as raw eggs, soups, broths, and gruels.

A normal baby is usually weaned between the eighth and tenth months. In some instances it is advisable to begin earlier, for example, when there is a deficiency in the quantity of breast milk owing to the ill health of the mother. Sometimes there are reasons why the baby should be nursed twelve months and longer so that it should always be left to the judgment of the physician when the baby would be weaned.

My rule has been not to wean during the

summer months, although it is imperative to do so if the infant's mother becomes pregnant. Weaning should not be attempted suddenly. It is better to commence gradually by withdrawing the breast in the morning and substituting a bottle for that meal. Following this meal we can again nurse the baby at the breast for two feedings, and substitute a bottle for its fourth meal.

8:00 A. M.	Bottle
11:30 A. M.	Breast
3:00 P. M.	Breast
6:30 P. M.	Bottle
10:00 P. M.	Breast

Care must be exercised in making this change of diet, as the slightest error in over-feeding or too frequent feeding will be rewarded by a severe attack of dyspepsia and the usual gastric disturbances, such as vomiting and fermentation in the stomach, causing diarrhea and colic.

If baby has been taught from birth to drink water from a bottle there should be no trouble while weaning him in having him drink his milk from the bottle. If it is impossible to make him drink from a bottle feed him from a spoon or let him drink from a cup. Some babies learn to drink from a cup when six or

seven months old. It is better to have a strange nurse feed baby while weaning him and keep the mother or wet nurse away so he can not see the breast and be reminded of the breast feeding.

CHAPTER IV

MIXED FEEDING

WHEN the breast-milk is of good quality, but the quantity is deficient, and the baby does not thrive and seems to cry from hunger, it is necessary to give him some additional food. This is usually done by giving baby alternate feedings of breast-milk and cows' milk.

The mother or wet-nurse should try to improve both quality and quantity of her breast-milk by building up her general condition. Frequently a subnormal or anemic condition requires an iron tonic. In other cases a day's outing to the country or seashore, with moderate exercise will stimulate the flow of milk.

As cows' milk is more difficult to digest than breast-milk, it must be given well diluted; therefore, give the baby the amount in the formula provided for a baby who is one month younger. For example: If the baby is four months old when you start the mixed feeding, give him of the formula of cows' milk that a baby three months old would receive and gradually increase until the formula for a baby of his age is given.

CHAPTER V

ARTIFICIAL FEEDING

ALL American mothers cannot nurse their infants. A sick mother, a tuberculous mother, or a very nervous mother is frequently prevented from nursing her baby through her systemic weakness. In some instances human milk may be necessary to save the life of a weak infant or one that has been improperly managed. A wet nurse can be secured and it is in many cases a life-saving substitute. The large majority of American mothers resort to the usual method of artificial feeding by using cows' milk adapted for the age and requirements of the infant's digestion.

Cows'
Milk.

The best cows' milk for infant feeding is sold in New York City at milk dairies under the name of certified or guaranteed milk. When certified milk can be obtained, then we have reached as near perfection as is possible to-day under strict municipal control. It is not necessary to sterilize or even pasteurize such milk, if normal conditions exist in the

infant. In special instances it may be necessary to use steamed milk, but this must be used only on the advice of the physician.

Milk for baby's feeding should be kept near the ice in a separate compartment of the refrigerator, or better still a nursery refrigerator, in which nothing but baby's food is kept, should be used.

To Pre-
serve Milk
for Feed-
ing.

CHAPTER VI

BOTTLE FEEDING

Utensils Required.

THE following utensils are required for the modification of milk at home: A two-quart pitcher; funnel, (glass or porcelain); one large spoon; one dozen 4-ounce bottles, (later 8-ounce bottles); one dozen anti-colic nipples; one box non-absorbent cotton; one large saucepan (for heating milk); one high saucepan (for warming bottles before feeding); one dairy, or pasteurizing thermometer.

The Bottles.

The long, round feeding-bottle is the best of all feeding-bottles. It is smooth on the inside, has no corners or angles, and can be easily cleaned. On the outside the graduated ounces are marked.

Care of the Bottles and Nipples.

As soon as baby has emptied the bottle it should be cleaned with a bottle brush in clear hot water, then filled with fresh water and set aside. In the morning before the day's food is prepared all the bottles should be boiled in a solution of baking soda and water,

two teaspoonfuls of soda to one quart of water. The bottles should then be rinsed thoroughly in clear boiled water.

The nipples should be cleaned in the same way as the bottles and when not in use should be placed in a covered jar in cold water, to which a pinch of salt has been added.

When the source of the milk is unknown and we are not familiar with dairy methods, the safest plan is to heat the milk in a double boiler until the steam rises, and continue heating at this same temperature for five minutes. We can also subject the milk to the steaming process by using a pasteurizer and steaming the milk about fifteen minutes. Milk should never be sterilized or boiled.

The first evil result noticed while using sterilized milk is that children so fed are ^{Evils of Sterilization.} stipated. Prolonged use of sterilized milk results in rickets. There are many cases of scurvy that can be traced to a long-continued use of sterilized milk.

A CHILD in good health, with excellent digestion, and normal stools, may be fed on milk diluted with rice water. If a tendency to constipation exists then oatmeal water instead of rice water should be used. My plan has been to order the milk diluted with rice water on one day, and oatmeal water on the following day. In summer if a tendency to loose bowels is noted, then milk diluted with rice or barley water should be fed.

No set rule can be given for all infants. Each infant's requirements must be studied. The size of the stomach varies in infants. The stomach capacity of one infant may be six ounces at the age of two months, while another equally healthy infant will have a capacity of and be satisfied with four ounces at one feeding. These individual peculiarities must be taken into consideration when estimating the quantity of food for each meal.

Formula No. 1 (for an infant from birth to one month):

Raw cows' milk 4 ounces
 Rice water¹ 16 ounces
 Granulated sugar 1 ounce
 (or 2 level tablespoons)
 Divide into 10 bottles and feed every 2 hours.

Formula No. 2 (for an infant from one to two months):

Raw cows' milk 7 ounces
 Rice water 20 ounces
 Granulated sugar 1½ ounces
 (or 3 level tablespoons)

Divide into 8 bottles, each bottle containing about 3 ounces, and feed every two and one-half hours.

Formula No. 3 (for an infant two to four months old):

Raw cows' milk 12 ounces
 Rice water 23 ounces
 Granulated sugar 1½ ounces
 (or 2 tablespoons and one teaspoon)

Divide into 7 bottles, containing about 5 ounces, and feed every three hours.

Formula No. 4 (for an infant from four to six months):

Raw cows' milk 22 ounces
 Rice water 20 ounces
 Granulated sugar 1½ ounces
 (or 3 tablespoons)

Divide into 7 bottles, each bottle containing about 5½ ounces, and feed every three hours.

¹ For making rice water, barley water and other diluents, see the chapter on Food Recipes. Page 79.

Food for
the Sixth,
Seventh
and
Eighth
Months.

Formula No. 5 (for an infant six to nine months old):

Raw cows' milk	28 ounces
Rice water.....	12 ounces
Granulated sugar	1 $\frac{1}{2}$ ounces

(or 3 tablespoons and 1 teaspoon)

Divide into 5 bottles, each bottle containing about 8 ounces, and feed every three and one-half hours.

Food for
the Ninth,
Tenth,
Eleventh
and
Twelfth
Months.

Formula No. 6 (for an infant from nine to twelve months):

Raw cows' milk	27 ounces
Rice water.....	5 ounces
Granulated sugar	1 $\frac{1}{2}$ ounces

(or 3 tablespoons and 1 teaspoon)

Divide into 4 bottles, each bottle containing 8 ounces, and feed every four hours.

Dissolve the sugar in the hot rice water and add the cold raw milk. Fill and cotton stopper the bottles and place in the refrigerator but not on the ice. At feeding time warm to feeding temperature by placing the bottle in hot water, then remove the cotton stopper and draw on the nipple.

CHAPTER VIII

PEPTONIZED MILK FEEDING

(Predigested Milk for a Baby with Weak Digestion)

WHEN cheesy curds (known as the protein) are found in the stool as white particles of cheese, then the milk formula is too rich and must be still more diluted. If two ounces of milk and two ounces of water have been given and curds are still found in the stool, then three ounces of water and one ounce of milk should be given. When we add a peptonizing powder, also known as a digestive agent, to the milk, we can modify the curd by partially digesting it.

Peptonizing powders are digestive agents sold in glass tubes or in tablet form. They are composed of pancreatin and bicarbonate of soda. Another predigesting powder sold in drug stores is known by the name of peptogenic milk powder.

The contents of a peptonizing tube should be added to a tablespoonful of cold water, and

How to Peptonize.

a quart of cold milk slowly added. Place this bottle of milk containing the powder in a kettle of warm water, temperature about 110° F, leaving it there for ten minutes. This peptonizing powder will partially predigest the milk. The milk must then quickly be brought to the boiling point, and placed in a cool place. When this method is used the milk does not change in taste.

To Avoid
the Bitter
Taste.

When milk is subjected to peptonization for several hours, an intensely bitter taste will result. To avoid this the digestive ferment should be killed by bringing the milk rapidly to a boil after it has peptonized ten minutes.

How to
Use Pe-
ptonized
Milk.

To one quart of milk add the contents of one peptonizing tube. Prepare as already stated. At feeding time pour off the required quantity and heat to the feeding temperature. A large bottle of peptonized milk can be prepared each morning. It should be kept in the refrigerator but not on the ice. Peptonized milk must be freshly prepared each day.

Indigestion
with
Cheesy
Stools.

A curded stool containing white, cheesy particles is usually found in dyspeptic disorders affecting the stomach and bowels. When peptonized milk has been used such curds must disappear and the stool assume

a yellowish condition. When improvement is noted the use of the peptonized milk should be continued for several months, so that the weakened stomach and intestines may be restored to their normal, healthy state. If improvement is not noted and curds continue to appear in the stool, then a complete change of food must be made. Milk in every form must be stopped. This will give the stomach a complete rest. As a substitute we can feed sweetened rice water or barley water, to which the white of a raw egg is added. Such feeding must be continued for several days but only under the guidance of a physician.

When cows' milk disagrees in spite of being diluted with plain water, rice water, barley water or oatmeal water as previously mentioned, then the addition of peptogenic milk powder will alter the ingredients of the milk and render it more digestible.

The screw cap on the peptogenic milk bottle is also a measure. To an eight-ounce bottle of raw milk slowly add with constant stirring, one-half measure (screw-cap) of peptogenic powder, heat slowly for ten minutes over a small flame or to a temperature of 115° F; then cool to feeding temperature. A more rapid method and one preferred by

Pepto-
genic
Milk
Powder.

me is as follows: Take of raw milk, 2 ounces; hot water, 2 ounces; peptogenic milk powder, $\frac{1}{4}$ measure. Dissolve the peptogenic powder in the hot water, add the raw milk, heat to feeding temperature and feed. By this process each bottle is prepared separately. The milk does not acquire a bitter taste and the curd is partially digested, which is a decided necessity for the weak stomach of an infant.

CHAPTER IX

FEEDING A DYSPEPTIC BABY

IF the baby's stool contains curds or greenish masses and if the baby is restless at night and colicky by day, then the following feeding will be advisable: Take of raw milk, 4 ounces; rice water, 4 ounces, and peptogenic milk powder, $\frac{1}{2}$ measure. Heat slowly with constant stirring until it comes to a boil.

If after three days in spite of this peptizing milk powder being added, curds are still seen in the stool, then stop milk feeding and give: rice water, 4 ounces; lime-water, 1 teaspoonful; granulated sugar, 1 teaspoonful; white of one raw egg. Feed every three or four hours. In preparing this formula dissolve the granulated sugar in the rice water, and add the lime-water. At feeding time warm the bottle and add the white of one raw egg and mix by shaking the bottle.

If persistent vomiting and green stools are present, then use from 4 to 6 ounces of sweetened whey. If the bowels are loose as in

summer complaint, and the stools are watery, give 1 teaspoonful of top milk to a teacupful of rice water, boil five minutes and feed when lukewarm.

If diarrhea continues in spite of the above method of feeding, then give of rice water, 6 ounces; lime-water, 1 teaspoonful; baked flour (see page 83), 1 teaspoonful; granulated sugar 1 teaspoonful. Feed every 4 hours. Mix flour and sugar with the rice water, add lime-water, boil five minutes and feed when lukewarm.

CHAPTER X

PROPRIETARY INFANT FOODS

THE market is filled with a large number of patent infant foods. This proves that there is a demand for something in addition to methods of feeding in vogue at the present day. Physicians as a rule condemn the use of these foods and chiefly for the following reasons:

First. Because the laity, except in rare instances, are not competent to feed an infant by following directions on the label of a box of food. No shoe is made that will fit every baby's foot, and no infant food made will agree with and be properly assimilated and digested by every baby. It is a well-known law that individualization is more demanded in infant feeding than in any other method of treatment. The digestive functions are totally different in various individuals, and so it must be left for the intelligent physician to note the size of the body to be fed, study the infant's wants, note the condi-

tion of his digestive apparatus and, last but not least, the stool must be properly examined. Then and not until then can any one prescribe the kind of food, the amount of food and the feeding interval demanded.

Second. No greater mistake is made than to suppose that because an infant has gained a few ounces and is gaining continuously, he is in absolute good health. When a large amount of starch or transformed starch, such as dextrinized starch, is fed to an infant, or when large quantities of sugar are given, there is usually a notable increase in weight. Bone and muscle, which are formed chiefly by the proteid element of food, cannot be replaced by the carbohydrate or fat forming substances. The ambition of many mothers and nurses is to display with pride a big fat baby and show large gains in weight. To accomplish this, frequently proprietary foods have been added in very large amounts, thus overtaxing the digestive apparatus and ending in dyspeptic or enlarged stomachs.

Advan-
tages of
Propri-
etary
Foods.

Having pictured the dangers it is but fair to state that there are very many virtues in these proprietary foods. I advise the use of many of these foods in infants six months old or older, especially for those requiring additional

food during the period of dentition. To the formula of milk and rice water previously given, add one teaspoonful or more of Eskay's food, Mellin's food or malted milk to each feeding. When a tendency to constipation exists Mellin's food or malted milk are especially indicated. Horlick's food is a food which, like Nestle's food, requires no milk, but only the addition of water. These foods are nutritious when added to milk. If milk is overheated, as it is when subjected to sterilization or prolonged pasteurization, then a decided constipating tendency usually results. To prevent constipation by using these foods, milk or diluted milk should be simply warmed or used in its raw state. When milk is boiled, constipation, due to the altered condition of the casein (curd), results.

CHAPTER XI

FEEDING DURING DIARRHEAL PERIOD

WHEN mucus continues to be present and the stools are thin, then milk in every form must be stopped. It is in this class of cases that even whey will not be tolerated. This form of diarrhea usually occurs in summer when milk has undergone fermentative changes due to the presence of bacteria. As a temporary substitute feeding, intending to correct looseness, I advise the following: Nestle's food, 1 teaspoonful; rice water, 3 ounces.

Rub up the Nestle's food powder with a little cold water, add the rice water and heat slowly until it comes to a boil. Do not add sugar or lime-water. The above quantity can be fed every three hours to a baby up to three months of age.

For a child 3 to 6 months of age give every $3\frac{1}{2}$ hours: Nestle's food, $1\frac{1}{2}$ teaspoonfuls; rice water, 5 ounces. For an infant 6 to 9 months of age give every 4 hours: Nestle's food, 2 teaspoonfuls; rice water, 7 ounces.

If this form of feeding is carefully prepared and the utensils are properly cleaned, then we must adhere to a proper feeding interval. An infant with loose bowels should be fed once in three hours and fed very slowly. Unless we adhere to the proper feeding interval and give the infant an interval of rest, we can excite diarrhea by too frequent feeding. A sympathetic mother will frequently indulge her baby and feed too frequently, thus stimulating the bowels by too much liquid food. For an infant 6 months old, the addition of 1 teaspoonful of Eskay's food to 4 ounces of milk and 4 ounces of rice water has served me very well to correct a tendency to very thin stools.

CHAPTER XII

DIETARY

FOR A CHILD FROM TWELVE TO EIGHTEEN MONTHS OLD

6 A. M. **O**RANGE JUICE; apple sauce, or prune jelly.

6:30 A. M. Milk, 8 ounces, with zwieback or Huntley & Palmer biscuit.

10 A. M. Milk, 8 ounces.

12:30 P. M. Four to 6 ounces of beef or chicken soup thickened with toast crumbs, or 2 to 3 ounces of expressed beef juice thickened with toast crumbs.

2:30 P. M. Milk, 8 ounces, with Huntley & Palmer biscuit.

5 P. M. A saucer of apple sauce or prune pulp.

6:30 P. M. Milk, 8 ounces.

FOR A CHILD FROM EIGHTEEN MONTHS TO THREE YEARS OLD

6:30 A. M. Orange juice; apple sauce, or prune jelly.

7 A. M. Milk, 8 ounces, with Mellin's food, 1 teaspoonful, or Eskay's food, 1 teaspoonful; zwieback or Huntley & Palmer biscuit.

A saucer of: Farina; hominy; cream of wheat; oatmeal, or arrowroot, and warm milk 6 ounces.

A soup, a meat, a vegetable, and a cracker. 2 p. m.

Beef or chicken soup thickened with split peas, sago, rice or farina; clear broth with yolk of egg or one or more ounces of expressed beef juice.

Joint of chicken; fish (broiled halibut); raw scraped steak; chicken or calf's-foot jelly without wine flavor.

Baked potato; spinach; carrots; cauliflower; asparagus; or stewed celery.

Huntley & Palmer biscuit; graham wafer; Albert cracker; or lady finger (stale).

Water.

A cup of milk or cocoa, a pudding and a cracker. 6 p. m.

Warm milk, 5 ounces, with white of egg; cocoa, 5 ounces.

Junket; custard; cornstarch pudding; tapioca pudding; farina pudding; or soft boiled egg.

FOOD RECIPES

To make barley water add one tablespoon-ful of pearl barley to one quart of cold water, boil two hours, adding water from time to time. Strain through muslin and add enough boiled Barley Water.

water to make one quart. When the barley flour is used mix two teaspoonfuls of the flour in a little cold water, add one quart of water and boil fifteen minutes. Strain through muslin if there are any lumps, and add enough boiled water to make one quart.

Rice
Water.

Rice water is made in the same manner as barley water, one tablespoonful of rice being used to one quart of water. When rice flour is used, add two teaspoonfuls to a quart of water.

Oatmeal
Water.

Oatmeal water is made in the same manner as barley water. Use one and one-half tablespoonfuls of oatmeal to one quart of water.

Gruels.

Gruel is made by adding two teaspoonfuls of rice flour, barley flour or oatmeal to one pint of cold water, and boiling briskly for one-half hour. Add a pinch of salt and a teaspoonful of granulated sugar.

Albumin
Water.

To make albumin water add the white of one raw egg to one-half pint of water. Pour the egg and water into a clean bottle and shake well, Feed through a nipple or by spoon.

Nutritious
Lemon-
ade.

A nourishing drink is made by adding the juice of half a lemon to the yolk of a raw egg; let it stand for five minutes, and then add two teaspoonfuls of granulated sugar and five ounces of water.

Beat the white of one raw egg with one ^{Nutritious} _{Orangeade.} teaspoonful of granulated sugar and add the juice of one orange and five ounces of water.

Take one-half pint of fresh cows' milk and ^{Junket.} heat it lukewarm (about 115° F.); add one teaspoonful of Fairchild's essence of pepsin and stir just enough to mix. Pour it into cups and let it stand in a cool place until firmly curdled. Serve plain or with a little sugar.

Curdle warm milk with the essence of pep- ^{Whey.} sin as directed in making junket. After the milk has curdled or clotted beat up the curd with a fork and strain it. The liquid is the whey which may be sweetened by adding one teaspoonful of granulated sugar.

Expressed beef juice is obtained by slightly ^{Beef} _{Juice.} broiling a piece of lean beef, and squeezing the juice from it with a lemon squeezer or a meat press. One pound of steak yields from two to four ounces of juice. Flavor it with a little salt and slightly warm it by standing a cup containing the beef juice in a bowl of hot water.

Take one pound of lean mutton, veal, beef ^{Broths.} or chicken, including some of the bone, a sprig of parsley and a blade of celery for one quart of cold water containing a pinch of

salt. Cook slowly for three hours, strain through muslin and remove the greater part of the fat.

Very
Weak
Tea for
Thirst.

Weak, cold tea (English Breakfast) made by steeping about three tea leaves in one cup of boiling water for two minutes, is very valuable to quench thirst in a baby suffering with diarrhea. Two or three teaspoonfuls may be given at one time and repeated every half-hour. Besides the cooling effect tea has a decided astringent property which makes it valuable in diarrhea.

Gelatin
Pudding.

A delicious dessert for a child two years old or older is made with gelatin powder and hot water. Cox's, Knox's, or Price's gelatin powder may be used. The directions for the proper proportion of powder and water will be found on each label.

Custard.

Beat together one fresh egg and a teaspoonful of granulated sugar; pour into a cup and add four ounces of milk, then tie over the cup a piece of linen, place the cup in a shallow saucepan half full of water, and boil ten minutes.

Soft-boiled
Egg.

Place a fresh egg in enough boiling water to cover it, move it to the back of the stove and let it stand five minutes where the water will keep hot, but not boil. Serve with a pinch of salt. An egg to be properly cooked

should never be boiled in boiling water, as the white hardens before the yolk is cooked. The yolk and white should be of a jelly-like consistency.

Place a slice of bread in the oven, and dry ^{Toast.} until crisp but not brown. Place it on a toast fork and hold it over the flame of a coal fire for a few seconds until brown on both sides. Butter while hot.

This meat pulp is prepared by scraping ^{Raw} ^{Scraped} ^{Steak.} with a dull knife a piece of raw or underdone round steak. Add salt to taste. The raw yolk of egg may also be added to the meat.

Tie several pounds of wheat flour in a cheese-cloth bag and boil in a pot of water for five hours. Remove from water and place in oven, and bake until quite brown on the outside. It will require from two to three hours slow baking. Break open and throw away the brown shell; the remainder, the baked flour, must then be grated into a powder.

PART III

Miscellaneous Diseases and Emergencies

CHAPTER I

VOMITING AND COLIC

THREE are so many causes for vomiting ^{from} in infants and children that whatever it ^{Improper} ^{Feeding.} be, the cause should be carefully studied. Vomiting may be the result of over feeding, or due to infants gulping their food or drinking it too hastily. When the vomiting that is due to improper feeding continues, absolute rest of the stomach is demanded. In such cases from an interval of two hours there should be a change so that we feed once in three or even four hours. In many cases of vomiting the food is too rich in fat (cream); hence more water should be added. When vomiting follows breast feeding, the baby should receive several teaspoonfuls of rice or barley water before each breast feeding to dilute the breast milk.

Vomiting may be caused by disease; hence repeated vomiting with or without fever means something more than a trivial stomach complaint. For example: If a child falls down

a flight of stairs and continues to vomit, such vomiting is due to concussion of the brain. If a child is developing scarlet fever the first symptom usually noted will be repeated attacks of vomiting. Brain fever (meningitis) frequently begins with vomiting. No amount of changing of the food formula will relieve such attacks.

When vomiting occurs, give a dose of castor-oil, or a rhubarb and soda tablet, dissolved in a little water, repeat this dose in two hours if vomiting continues. Dilute the food by using one-half the quantity of milk previously given and add an equal part of water. If vomiting still persists after these measures have been taken, consult the physician at once.

Colic.

Colic, as it frequently occurs in young infants, is usually caused by indigestion. It occurs most frequently in bottle-fed infants. When it occurs frequently in a breast-fed infant, give an ounce of hot water just before nursing. The mother should see that her bowels move freely each day; she should take plenty of exercise and a light, nourishing diet.

When colic exists baby will draw up his legs on the abdomen and cry and scream. I have already in the article on "Cry," called attention to the peculiar, sharp cry denoting

pain. The abdomen is usually distended and if the ear is placed over the abdomen a distinct rumbling noise can be heard. No amount of rocking or soothing will comfort the baby until the colic is relieved. A hot-water bag, or a warm flaxseed poultice, should be applied to the abdomen. Rubbing the abdomen with warm sweet-oil, as described in the article on massage, will usually relieve the pain. One drop of essence of peppermint to a teaspoonful of warm water may be given every fifteen minutes until baby is soothed. Injections of warm soap water into the bowel will instantly relieve the colic. When colic recurs the food requires modification. As a rule we must add less milk and increase the diluent, be it rice or barley water.

Hiccup is due to a spasm of the dia-^{Hiccup.} phragm. A tight-fitting abdominal bandage will frequently check this spasm. One drop of Hoffman's anodyne may be given every hour to a baby one year old, and every half-hour to an older child.

If the baby overloads his stomach, or if ^{Convulsions.} improper food has been given and stagnates in the intestine, general poisoning may result, with fever and convulsions. When convulsions appear the muscles of the arms and

legs are usually stiffened, the facial muscles are distorted, the eyes roll upwards, the jaws are firm, the teeth locked, and frothing of the mouth may take place. When convulsions occur the physician should be summoned; until then, the following general rules should be followed:

Mustard
Foot-bath.

An ice-cold cloth or an ice-bag may be laid on the head. A mustard foot-bath should be given by immersing the feet in water, as hot as can be borne by the hand, to which one or two tablespoonfuls of powdered mustard should be added. The feet should be bathed until the skin is reddened or until the muscular rigidity ceases. The bath should not be prolonged more than three minutes. If the spasm continues after the mustard foot-bath has been given, then a pint of soapwater should be injected into the bowels as an enema and continued until a movement of the bowels results.

CHAPTER II

CONSTIPATION

THE baby's bowels should move at least once in every twenty-four hours. If the action of the bowels is sluggish, he will not have a movement every day. This sluggish action can be caused by different conditions, but is most often due to faulty feeding. If ^{In Breast-fed Babies} the baby is fed at the breast, the mother or wet- nurse must see that her breast milk is kept in a healthy state. Her milk should be examined by a physician or chemist to determine whether or no enough fat (cream) is present. If a deficiency of cream exists then we can give baby one or more teaspoonfuls of cream from cows' milk, in a little warm water immediately before nursing. Several teaspoonfuls of water sweetened with granulated sugar and given before nursing will frequently relieve constipation.

If the baby is bottle-fed and his digestion ^{In Bottle-fed Babies.} is good, then increase the quantity of cream or top milk by adding a teaspoonful or more

to each bottle. If milk has been subjected to prolonged heating, then stop using boiled or sterilized milk and give raw milk which is warmed to about 100° F. or the usual feeding temperature. A teaspoonful or more of Mel-lin's food added to each bottle will modify constipation for the time being. A teaspoonful or more of malted milk added to each bottle will also have a laxative effect.

When constipation follows the use of Es-kay's food, it can be corrected by adding 5 to 10 grains of phosphate of soda or calcined magnesia to the morning bottle. No more than one dose should be given in a day. If this does not correct the constipation, then no change of food should be made without medical advice.

Water. A drink of water between feedings will frequently help to relieve continued constipation.

**Fruits and
Fruit
Juices.** The scraped pulp of a raw apple or the pulp of a good mellow peach will aid in relieving constipation. Apple sauce or prune jelly may be given between meals. Orange juice, grape juice, pineapple juice or apple cider will be found beneficial.

Massage. Kneading or stroking the abdomen over the bowels will stimulate the circulation if regularly performed. The fingers or hands

of the mother or nurse should be oiled and by means of gentle stroking begin in the following manner: Have your hands warmed as well as oiled, begin at the right groin and lightly rub the fingers in a circular motion upward, until the umbilicus is reached; then rub across the umbilicus and down the left side to the groin. Begin again at the right groin and press a little deeper each time as the baby grows used to it. This should be done every morning and evening for from five to ten minutes and can be continued for several weeks. In obstinate cases several months of treatment may be necessary.

The baby, as I have said, should not be ^{Enema.} allowed to go more than twenty-four hours without a movement. Immediate relief can be given by an injection into the bowel through the rectum of one-half pint of luke warm castile soap water, to which one tablespoonful of glycerin has been added.

Sometimes a very little stimulant to the <sup>Supposi-
tories.</sup> rectum is all that is needed. A suppository usually acts quickly. The best for the baby are those made of glycerin or gluten. They are small and conical in shape and resemble the old-fashioned "soap stick." One of these suppositories should be dipped into vaselin

or olive-oil and gently inserted into the baby's rectum and held there until the movement pushes it out. These suppositories may be continued for several weeks.

Drugs.

No mother or nurse should give the baby any drugs for his bowel movements without the supervision of a physician. They should try any or all the remedies here suggested before giving the baby any drugs. Many cases of death by poisoning have occurred through the careless use of patent cathartics.

CHAPTER III

MALNUTRITION (MARASMUS), RICKETS, ETC.

WHEN the baby, who has been in good health while fed with human breast milk, is suddenly deprived of this good food, trouble usually begins. If too rich cows' milk, such as top milk or cream is tried, the baby will vomit and be colicky, the stool will contain curds and as a result there will be restlessness and crying day and night. The colic and the vomit denote that the food does not agree with the stomach. Such infants require an immediate change of food suited to their digestion. If this trouble is not rapidly corrected, they do not gain in weight but lose. When this condition persists for a month or two, the fatty cushions on the arms and legs disappear and the infant seems to shrivel up, pine and waste away. These infants resemble little skeletons and their skin hangs in loose folds. Such infants require fresh air and frequently owe their marasmus to being deprived of it in tenement-houses or small, ill-ventilated apartments.

The milk of a wet-nurse, even though her milk is several months younger than the marasmic baby, will frequently work wonders; goat's milk, properly modified, is frequently adapted to relieve this condition. The difficulty in prescribing proper food for a marasmic child should be thoughtfully considered by the mother or nurse before resorting to experimental feeding. The physician should be called and a definite plan of treatment followed. We must not expect to see immediate changes, although improvement should be noted within four weeks. As the life of the child is at stake, no conscientious mother or nurse will risk experimenting with the food, as such attempt may prove fatal. Cod-liver oil and malt may do good, but even these remedies should not be given without medical opinion.

Rickets.

Rickets is a disease caused by improper feeding and improper ventilation. The bones, instead of being hard and firm, are soft and spongy, and sometimes very thin. The muscles, instead of being hard and firm, are soft and flabby. There is a general backwardness of development. Ricketty children are backward in teething, and when the teeth do appear, decay very rapidly. They are backward in walking and backward in talking.

and the soft-spot (fontanel) on the top of the head remains open months longer than it should. Owing to the soft bones which yield on walking the child becomes bow-legged. The ends of the bones are enlarged, and the ribs are beaded.

These children usually suffer from constipation and have a distended abdomen. They are restless at night and peevish by day. They perspire freely, especially while feeding. The back of the head is usually bald from rubbing the head back and forth on the pillow. If a breast-fed baby shows signs of rickets the breast milk must be examined at once by a chemist in order to determine the quantity of fat, sugar and proteids that it contains. When nursing is prolonged and the mother menstruates regularly, rickets may develop. As a rule babies fed on condensed milk or those receiving insufficient fat or cream develop rickets. When the baby is kept indoors and over-bundled with clothing, he soon loses his appetite and if this continues for weeks and months he will become under-nourished, and as a result rickets in some form will be shown. Fresh cows' milk simply warmed, not boiled, should be given. Fruit juices, such as orange, lemon, pineapple and

grape juice and raw-scraped apple pulp should be given. Butter, yolk of raw egg, with sugar, cereals, and the dairy products, such as cream cheese should form the bulk of the diet. When severe constipation is encountered, honey and several teaspoonfuls of sweet oil may be given daily. Cod-liver oil, maltin or morrholin should be given in doses of one teaspoonful three times a day. Ricketty children require fresh air; they should sleep in well-ventilated rooms. While out of doors, they should be placed in the sun. A sun bath is very important. The daily morning bath should be of lukewarm water to which one pound of sea salt is added. After the bath the child should be briskly rubbed with a coarse turkish towel. No case of rickets should be neglected, or the deformities will remain throughout life.

Scurvy. A child that has been improperly fed will frequently show evidences of such bad feeding by having a weakened framework. The bones will be spongy and the muscles flabby. The joints will swell and resemble rheumatism. The child will be covered with bluish-black spots as though it were bruised. New spots will appear when the child is roughly handled. The gums, with a deep purple

color, are swollen and look spongy. They frequently bleed. Nosebleed or blood in the urine and stools accompanies this condition. The child appears pale and has no appetite.

If the child has been fed with a patent food its food must be changed at once. Raw milk must be given and all forms of steaming and sterilizing must be stopped. Orange juice, grape juice and raw steak juice must be added to the diet. This is generally all the treatment necessary.

In jaundice there is an intense yellowish ^{Jaundice.} color to the skin. The whites of the eyes appear yellowish. The urine instead of being yellow in color has a brownish color. The stools instead of being brown, are white or clay colored. The child may vomit and fever may be present. Headache will be complained of by older children. They are languid and tired and will want to go to bed. When the new-born baby has jaundice the physician should at once be summoned. Jaundice may be caused by a liver disturbance or by some poison in the blood. In older children jaundice is frequently associated with catarrh of the stomach, in which case it extends to the bile ducts. Under the care of a physician these cases recover.

CHAPTER IV

FEVER AND TEMPERATURE

THE normal temperature of a baby ranges between $98\frac{1}{2}$ and $99\frac{1}{2}$ ° F. If the baby has a temperature of 99 to 100° F he should not be considered feverish. A temperature of 101 to 102° F usually means a mild disease. A temperature of 103, 104 or 105° F means a severe febrile condition. Children are very sensitive and hence respond very quickly to conditions giving rise to fever. For instance, an overloaded stomach or a stagnant bit of fermenting milk-curd in the intestine will give rise to auto-intoxication resulting in fever as high as 105° F and frequently will cause convulsions.

Sudden Fever. If a child is well in the morning and suddenly develops a temperature of 103, 104 or 105° F, this usually implies a sudden disturbance of the stomach or bowels. As a rule sudden fever is not dangerous, but responds readily to treatment.

When fever comes on gradually, and increases $\frac{1}{2}$ to 1 degree every day for a number of days, it is usually a bad sign. This form of temperature is met with in typhoid fever.

It is important to remember that fever is absent in many diseased conditions. For example, brain fever and even scarlet fever and pneumonia may sometimes be present and still the temperature of the body be normal during the whole course of the disease.

A teaspoonful of castor-oil is always a safe remedy no matter what brought on the fever. A teaspoonful of aromatic sirup of rhubarb may be given once only. One of the most rapid methods of reducing fever is by washing out the bowel, with a pint of soap water, by means of a fountain or bag syringe. If the mother or nurse is skillful the injection may be given high up in the bowel, by introducing a catheter two or three inches into the rectum and following it up into the colon three inches more. Fifteen drops of sweet spirits of niter in a teaspoonful of water may be given. This may be repeated every hour until three or four doses have been given. As niter acts on the kidneys it eliminates fever and poisonous products through the kidneys by increasing the flow of urine.

Sponging the Body. If fever persists then a sponge bath, consisting of one part of alcohol and five parts of cold water, should be given. The body should be sponged every half-hour until the physician arrives.

Rash. If an eruption is found on the body, a physician should be consulted before any sponging or cooling is begun.

Feeding During Fever. If the child is still on a milk diet, we should give a weaker food by taking away half the quantity of milk and adding the same amount of water. In some fevers even weak milk will not be tolerated and nothing but whey or thin soups will be tolerated.

Older children who have been on a diet of solid food should receive only liquids during the fever. Plenty of water should be given.

CHAPTER V

GENERAL RULES FOR CONTAGIOUS DISEASES AND FEVERS

PUT the child to bed.

Give a teaspoonful of castor-oil or aromatic sirup of rhubarb.

One hour later give an infant 15 drops of sweet spirits of niter, and an older child 30 drops.

If twitching of the muscles is noticed and the child has had convulsions before, then give a strong mustard foot-bath for two or three minutes.

If twitching continues one-half hour after the foot-bath, then give an injection into the rectum of one pint of soap water.

For thirst give one or several tablespoonfuls of citrate of magnesia.

Do not give pure milk in fever but dilute the food one-half. Thin soups, lemonade and orangeade may also be given.

Do not bathe the child if an eruption is seen on the skin unless the physician especially orders it.

Wrap the patient in a blanket and take him out of the sick-room into an adjoining room twice a day to permit thorough ventilation of the sick-room.

All bed linen and clothing of a child worn during a contagious disease should be soaked over night in a solution of 1-2000 bichloride or in javelle water before being boiled and washed. All visitors and friends should be excluded from the sick-room until the physician has made the diagnosis.

CHAPTER VI

MEASLES, SCARLET FEVER, DIPHTHERIA AND CROUP

IN measles the first thing usually noticed by the mother is that the baby appears to have taken cold. He will sneeze, have a catarrh in the head and cough. The eyes are dull, the appetite poor and there is usually fever. Three or four days later a rose-colored rash will appear on the face and neck, and later spread to the chest, arms and legs.

At the first symptoms the baby should be put to bed in a darkened room, or with his back to the light on account of the inflammation of the eyes. Plenty of fresh air should be allowed to enter, and the temperature of the room kept at about 70° F. All other children should be kept from the room or house if possible, as nine out of every ten, if exposed, will take this disease. If children remain well fourteen days after exposure, then they will probably escape. As a rule the disease appears between seven and fourteen days

after an exposure. Bathing should be stopped. No child should be permitted out of bed, no matter how good he feels until the rash has entirely disappeared. This may in some cases require a child to be in bed one or two weeks. Complications can be avoided by this precaution. It is the careless mother or nurse who, disregarding a mild bronchitis, will expose a sick child in order to harden it and later be rewarded by finding that the child has contracted a fatal pneumonia. Continued fever after the measles' rash has disappeared means the development of some complication.

German
Measles.

This disease resembles ordinary measles, although it is a much milder disease and does not begin with sneezing and coughing. Sometimes there is a slight fever, but more often the first symptom noticed is the rash. The pale red rash usually appears all over the body. It varies in size from a pin-head to a small pea. It disappears in three or four days. The child should be kept in bed and put on a light diet. This is all the treatment necessary. The patient should be isolated. If a child has been exposed to this disease he will usually show signs of it at any time from the fourth to the twentieth day after exposure.

The early symptoms of scarlet fever are ^{Scarlet Fever.} sore throat, headache, high fever, and vomiting which may occur in spite of a most careful diet. Convulsions sometimes occur. From twenty-four to thirty-six hours after the first symptoms are noticed a rash of a deep red or bluish-red color usually appears, first on the neck and chest, and later covering the body. This rash is very fine and the parts of it appear so close that the whole body has a very red appearance. This rash usually remains five or six days and then begins to peel off or desquamate; this usually takes from two to four weeks. The strictest isolation must be observed. The desquamated skin can transmit the disease to a healthy child, months after the patient has recovered.

A child after being exposed to a case of scarlet fever may show the first symptoms any time within twelve days. All bedding and clothing coming in contact with the patient must be thoroughly disinfected by being soaked in a solution of 1-2000 bichloride solution over night before being boiled and washed. The toys should be burned. The treatment must be left to the physician.

Chicken-pox is a contagious disease. If the ^{Chicken-pox.} baby has been exposed he will probably have

an eruption between the fourth and fourteenth days after exposure. Usually the first symptom noticed is a slight fever and a series of pimples scattered over the body. These pimples are at first small, and gradually grow larger and resemble water blisters. In a few days they dry up and the crust falls off. The eruption does not all appear at one time, for while new pimples are forming, others are drying up. This disease is frequently found in very young infants, especially if they have not been vaccinated. There is no danger in this disease if the child is kept in bed, the bowels cleansed, and no solid food is given. It may be communicated to healthy children as late as sixteen days after the first symptoms appear.

Diph-
theria.

Usually the first symptoms of diphtheria are loss of appetite, swelling of the glands at the angle of the jaw and grayish white or yellowish patches in the throat. As soon as the mother sees patches in her baby's throat she should notify her physician at once. If they are true diphtheritic patches prompt treatment must be given if the baby's life is to be saved. Until the physician arrives, one or two glasses of citrate of magnesia may be given to cleanse the bowels. No solid food

should be given, only milk, gruels and broths. For thirst, ice-cream and water ices should be taken. For very young infants dilute the food one-half with water. The patient must be strictly isolated. If other children are exposed, they are likely to get the disease any time within four weeks after exposure.

There are two kinds of croup, catarrhal or ^{False} Croup. false croup and diphtheritic or true croup. Catarrhal or false croup is the kind that comes on suddenly in the night in an apparently healthy child. It is the result of a simple filling up with mucus. The baby may have had a cold or been exposed, but more often no special cause can be found for this sudden attack. The baby may wake up during the night with a hoarse barking or crowing cough, and seem to breathe with difficulty.

One of the best methods of relieving this cough is to have a croup kettle or a teakettle with a long spout so placed that steam coming from the kettle will be inhaled by the baby. Ten or fifteen drops of spirits of turpentine may be added to the steaming water. This steam should be kept up for several hours so that the air in the room becomes saturated. If the attack is very severe a teaspoonful of sirup of ipecac may be given. If vomiting

does not result then give another dose of ipecac in twenty minutes. This form of croup comes on suddenly and disappears suddenly if the emetic is given. There is no danger to a child's life even though such an attack comes on after exposure to cold.

True
Croup.

A croupous cough that is accompanied by fever and comes on very slowly is usually of a serious nature. If white patches or spots can be seen in the throat then the sooner the physician is consulted the better for the child.

CHAPTER VII

WHOOPING-COUGH AND TONSILLITIS

THE first symptoms of whooping-cough ^{Whooping-Cough.} are those of an ordinary cold with a cough. This lasts about ten days, when the cough gets stronger until a pronounced spasm appears. These spasms consist of a number of short, quick coughs, then a long-drawn inspiration known as "the whoop." During these coughing spasms the baby will get very red, sometimes bluish-red in the face, and frequently the spasm ends with a vomit. It will be noticed that the cough is worse indoors and is least troublesome out-of-doors. The spasms are strongest at night. This is usually so because the windows are tightly shut. Fresh air night and day are very necessary for a cure.

The danger in whooping-cough consists of exhaustion following lack of food as a result of the constant vomiting. If a breast-fed baby suffers with whooping-cough, the feeding should be more frequent and less in quantity. The same rule applies to a bottle-fed

baby. For example: If baby has been receiving a bottle containing six ounces every three hours, he should, while the vomiting lasts, receive a bottle containing four ounces every two hours. If the swallowing of food provokes a coughing spasm and results in vomiting, then the food may be given, in some cases every hour. In this method baby will have a chance to obtain a little nourishment from his food before it is thrown off. Concentrated food, such as yolk of egg, white of egg, and steak juice, made by expressing the juice from broiled steak, may be given. Older children may receive custard, junket, cereal puddings and raw-scraped steak mixed with the yolk of an egg. Cod-liver oil in teaspoonful doses given three or four times a day will nourish the body. Medication does not, as a rule, help in this disease. Whooping-cough runs its course in about twelve weeks; plenty of fresh air night and day, or a change of air to the seashore or mountains, tends to shorten the disease. Whooping-cough is one of the most contagious diseases and if a well child is exposed to it he is pretty sure to show symptoms within three weeks after exposure.

Cold in
the Head.

One of the most common disorders of childhood is cold in the head. Sneezing, sniffling,

and a running nose are the symptoms. If fever accompanies the cold, consult a physician, as a running nose is frequently a symptom of adenoids and one of the earliest symptoms of measles. Relief can be afforded by syringing the nose with warm water containing a pinch of bicarbonate of soda, morning and evening. If the nostrils are plugged with mucus one or two drops of alboline or sweet oil should be dropped into the nostrils from a spoon or a medicine dropper. Older children can be allowed to sniff salt water into the nostrils.

When a child refuses to eat and has fever ^{Tonsillitis.} the throat should be examined. If the tonsils are inflamed they will be either reddened or coated with whitish pin-point spots. The temperature may reach as high as 102-104° F. Until a physician can prescribe, citrate of magnesia may be given in wineglassful doses, as it will relieve the thirst and has a laxative effect. Cold cloths should be wrapped around the neck and small pieces of cracked ice or ice-cream may be given by the mouth.

This disease should be treated by a physician to avoid having chronic enlarged tonsils which may require removal later on.

Adenoids consist of small masses of red- ^{Adenoids.}

dened granulations resembling proud flesh. They occur in the back of the nose and on the pharynx. They can seldom be seen by looking into the throat, but can be felt by introducing the finger into the throat. If the child snores at night, is restless and cannot sleep, if it cannot breathe through its nose and the mouth is used for breathing, then adenoids are very likely present. When catarrh recurs several times adenoids usually develop. Bed-wetting is frequently noted in children suffering with adenoids. These children are peevish, sensitive and cry; they are very nervous and must be coaxed to eat. They gag and vomit easily. They are usually very thin and frail and backward in development. They have a foul breath. If adenoids are present they should be removed by the physician.

Mumps.

In mumps the glands situated under the angle of the jaw at the sides of the neck become swollen. Sometimes both sides are affected. There is a loss of appetite, pain on opening the mouth and sometimes a slight fever. This disease can spread; hence all children must be kept away from it. If a child has been exposed he may develop symptoms as late as two or three weeks. These cases get well very easily if a liquid diet is

given, the bowels kept loose, and the swollen parts protected with absorbent cotton and oil silk.

Swollen glands may occur on the sides of the neck or below the jaw, under the arms or in the groins. These swellings may disappear of themselves, but when they remain for months we must suspect a constitutional disease, such as tuberculosis or scrofula to be the origin of the trouble. When glands swell on either side of the neck, the throat, especially the tonsils, require examination. Swollen glands in the neck may be caused by diphtheria in the nostrils or throat, or by an abscess forming in the middle ear. Lice will sometimes cause swelling of the glands around the neck and back of the head. Swollen glands will sometimes appear in the armpits after vaccination. A proper examination should be made by the physician to determine the cause of the glandular swellings.

CHAPTER VIII

SKIN DISEASE

Eczema.

ECZEMA usually occurs as an inflammatory redness of the cheeks, arms and legs, especially between the thighs. It may occur at any age and is most frequently met with in the bottle-fed infant suffering with constipation and especially in babies suffering with rickets. It may also be the result of unsanitary measures such as permitting an infant to fall asleep and not change its soiled diaper. Fever does not accompany this condition.

When eczema exists no soap should be used. The skin should be bathed in warm milk to which equal parts of bran water has been added. Bran water is made by adding one cupful of bran to one quart of hot water, allowed to soak for one-half hour, and then stirred occasionally and the liquid poured off. Oatmeal water may also be used to bathe the parts and will relieve the itching. After the

bath apply zinc salve. If the eczema does not disappear within a few days after the above treatment a physician should be consulted.

In summer during extreme heat a finely mottled rash is sometimes found on the skin of children. This condition may also occur in winter if the child is too warmly dressed. To relieve this, the flannels must be laid aside and only muslin or linen worn next to the skin. The body should be powdered with talcum or wheat flour after being washed with pure cold water. If itching accompanies this rash, a bran bath should be given.

Very tight underclothing or very warm clothing produce perspiration. If such perspiration is very acid, it may cause irritation and by the friction of the clothing develop inflammation. When this continues the skin will appear highly inflamed and reddened, and at times develop crusts resembling eczema. When the buttocks or the genital tract is inflamed and reddened we will notice that the child moves its legs or an attempt to scratch is made by rubbing the thighs. If this condition persists for a number of days then the skin between the thighs will develop crusts and we have an eczema. Neglect to change a wet diaper may cause chafing. If a baby

is soiled from stool and not properly cleaned, chafing may occur.

Do not use water to bathe the child. Clean the chafed parts with sweet oil and dust liberally with corn-starch. Zinc salve should cover the inflamed parts and if they do not improve within twenty-four hours consult a physician.

*Chapped
Hands
and Face.*

A tender skin when exposed to severe wind will sometimes crack and the skin appear very rough. This condition is very likely to occur if the skin is not properly dried before going out in the cold weather. At times a slight oozing of blood may take place. Apply melted cocoa-butter, cold-cream or zinc salve three or four times a day and stop bathing with water for at least one week.

Sunburn.

A highly inflamed and reddened skin frequently results from exposure to the sun's rays. Camphor ice, zinc salve or sweet cream from top milk applied several times a day will remove this inflammation.

Hives.

Round red blotches, sometimes as large as a twenty-five cent piece, having a whitish center resembling a mosquito bite, may appear on the skin. They frequently follow a disordered stomach. These blotches come and go very quickly and require cooling with

baking-soda moistened with cold water and made into a paste. As a rule a dose of castor-oil or a teaspoonful of rhubarb and soda mixture for a baby one year old may be repeated once every three hours until the bowels are thoroughly cleansed. For a baby six months old one-half the dose should be given. It is a good plan to stop all milk for at least six to eight hours, and give instead sweetened rice-water or plain water. In an older child stop eggs or meat one or two days and give buttermilk instead. Plenty of water should be permitted.

Boils are abscesses of the skin and usually occur on the head and neck. They are most frequently due to local infections. When these boils occur on the scalp the hair should be trimmed around the boil and an incision will be necessary to empty the pus. All boils require careful antiseptic dressings which should be applied by a trained nurse or a physician.

To remove the heat from a sting of an insect or mosquito, the parts should be bathed with spirits of camphor or pure alcohol. If a child is forced to live in a locality where mosquitos abound, he should be screened both night and day. The germ of malaria can be

Mosquito
Bites.

carried by a mosquito and an infant may be infected through its bite. Sprinkling the pillow and bedclothing with a teaspoonful of alcohol to which ten drops of oil of sassafras has been added, has a tendency to keep mosquitos away.

Ring-
worm.

A ringworm produces a round, red mark about the size of a twenty-five cent piece, sometimes larger. It is most frequently found on the forehead or scalp; it may, however, attack any part of the body. It is caused by a fungus which can be conveyed from person to person. If it appears on the scalp the hair should be cut short and the affected part painted with tincture of iodine. The cap, towel and everything coming in contact with the ringworm should be destroyed or it will convey the disease.

CHAPTER IX

ACCIDENTS AND EMERGENCIES

If the burn is mild and the skin but slightly ^{Burns} broken, dust corn-starch or wheat flour over the burned area. Exclude air from the wound with a gauze bandage. If the burn is severe and blisters have been raised they should be opened with a new clean needle, and after the water has been emptied from the blisters, linseed oil and lime-water in equal parts should be applied by saturating sterilized cheese-cloth or clean linen. No one should think of treating a severe burn without consulting a physician.

If a splinter enters the flesh it should be ^{Splinters} removed with the aid of a clean, sharp needle and the part bathed thoroughly with witch-hazel. If a needle-point is imbedded and is difficult to dislodge a physician should be consulted. Frequently needle-points become so deeply lodged that an X-Ray examination must be made to locate them.

Bumps
and
Bruises.

If a child falls and has a bump or a bruise, ice-cold cloths or cotton saturated with lead and opium wash should be applied. In the absence of lead and opium wash witch-hazel may be applied.

Cuts.

If the skin is lacerated or torn and bleeds freely the wound should be washed with a one per cent. carbolic solution or with a 1-2000 bichloride solution. It is necessary to wash the wound at least twice a day and apply a piece of iodoform gauze and a bandage over the wound. No one should dress a wound without thoroughly scrubbing his finger nails and hands. By introducing dirt from fingers or nails blood-poisoning can result.

If blood spurts from the wound, an artery has been cut and we should tie a handkerchief or a stout piece of muslin over the wound until a physician can be summoned.

If the cut is very slight it may be washed in clean boiled water and tied with a clean piece of linen.

Foreign
Bodies
in the
Throat
or
Stomach.

If an infant has swallowed a whistle, a button or similar foreign body, give him a thickened pap or bread soaked in milk until the physician can be called. If any difficulty with breathing is noticed give a teaspoonful

of sirup of ipecac to produce vomiting. By this means we can frequently remove the foreign body. Never give a cathartic. Holding baby head down, and slapping him firmly on the back will sometimes remove a foreign body from the throat.

Hold the lids apart and with the aid of a ^{In the Eye.} small piece of linen, try to remove the foreign substance. An eyestone or flaxseed placed in the corner of the eye will sometimes remove the foreign substance. If the foreign body is not easily dislodged, do not tamper with the eye but call in a physician.

If a very young infant has a foreign body ^{In the Nose.} in the nose, tickle the nostril by inserting a soft, dry feather. This will make him sneeze. In an older child the free nostril may be held shut and the child instructed to blow through the obstructed nostril.

No one but a physician or a trained nurse should attempt to syringe a nose, as there is danger of the liquid flowing through the nostril into the middle ear and causing an abscess.

An insect can usually be dislodged from ^{In the Ear.} the ear by pouring one or more drops of sweet oil into the ear. A bead or similar substance can be removed by syringing the ear with lukewarm water. Do not use any hairpins or

button-hooks to dislodge foreign bodies. As a rule, more harm can be done by meddling with a deep-seated substance than by leaving the ear alone until a physician can be consulted.

Poisoning. If a child has swallowed a poison, castor-oil should be given. If possible a dose of ipecac should follow in a few minutes the castor-oil. If an acid such as carbolic or oxalic has been swallowed, then olive-oil should be forced down the child's throat. Bicarbonate of soda and water may be given if any acid has been swallowed. Warm or cold milk may be given as an antidote to any poison, until the physician arrives and uses the stomach-pump to empty the stomach of its poisonous contents. If a poison similar to an overdose of paregoric has been swallowed and baby is in a stupor, then give several drops of whisky in water, and repeat every half-hour. Give a mustard foot-bath. If the stupor persists combine whisky with hot coffee.

Bleeding. When bleeding comes from any part of the body apply styptic cotton to the bleeding surface and bandage tightly. Powdered alum sprinkled on absorbent cotton is also useful to stop bleeding.

If the finger is cut or scratched and bleeds,

wash it in clean cold water and bandage tightly with a clean bandage.

Nosebleed can be stopped by inserting into the bleeding nostril a small piece of absorbent cotton soaked in tincture of iron. Small pieces of ice held against the nose will frequently stop the bleeding.

CHAPTER X

EAR AND EYE

Earache.

WHEN the baby has earache he will cry and scream continuously. As a rule he will put his hand to the affected side of his head, or press his head deep into the pillow. Babies suffering with earache invariably rub their gums so that they sometimes convey the impression that they are teething. In some instances the head will be thrown back and the baby will appear to have a spasm of the muscles of the neck. When the affected ear is touched, baby will usually jump and scream with pain.

A small hot-water bag should be covered and placed on the pillow and the baby allowed to rest his head on it. If this does not help the ear should be syringed with warm chamomile tea or with a teacupful of warm water containing one-half teaspoonful of bicarbonate of soda. A small bag containing salt may be warmed and applied for its dry warmth behind the ear. Do not stick hair-

pins or other substances into the middle ear but rather consult a physician if the symptoms do not subside after these remedies have been tried.

A running ear that follows influenza, measles or scarlet fever requires careful antiseptic treatment. There is always a possibility of a running ear extending through into the deeper portions known as the mastoid cells. Running Ear.

For a simple running ear, the ear may be washed with a teacupful of warm water containing one teaspoonful of bicarbonate of soda. This should be slowly injected into the ear by means of a small glass ear syringe. Powdered alum or boric acid, one-half teaspoonful to a half pint of warm water, temperature 105° F., may be syringed into the ear night and morning.

Projecting ears can be corrected by having the baby wear a thin but tight-fitting cap every night and during the day while asleep. The younger baby is, the easier this trouble will be corrected. At any age it will take months of constant treatment. Projecting Ears.

If baby wakes up in the morning with a cold in the head we may find pus oozing from the eyes, and also find that the lids are glued together by this pus drying and forming Crusted Eyelids.

crusts. These crusts can be softened and loosened from the eyelashes by soaking them in boric acid solution (a pinch of boric acid to a wineglassful of lukewarm water) applied on absorbent cotton. The lids should be bathed with this solution several times a day.

CHAPTER XI

BAD HABITS, ETC.

THE habit of thumb sucking is usually ^{Thumb Sucking} formed at or about the period of dentition. An irritant gum will seem to be relieved by the pressure of the finger. This habit may continue long after the child is through teething. The application of tincture of aloes or a two per cent. quinine solution to the fingers will in many instances break up his habit, owing to the bitter taste.

Nail biting is usually found in nervous ^{Nail Biting.} children and is especially noticed when these children are frightened. Correction by reasoning, scolding or spanking is seldom effectual. Place gloves on the child's hands constantly day and night as a reminder. If the habit continues in spite of the gloves, apply tincture of aloes to the nails and finger-tips night and morning.

When children over three years of age wet ^{Bed Wetting.} the bed at night a distinct reason for the same exists. In a boy a tight foreskin may cause

irritation and require circumcision. In girls worms wandering from the rectum into the vagina may irritate the opening of the bladder. At times the urine is at fault and must be corrected by proper diet. Meat should be stopped. Milk, eggs and fruit may be given. The foot of the bed should be elevated and the bladder emptied the last thing before retiring. Electricity may be necessary to restore the tone if weak bladder muscles exist. Electricity should only be given by a physician.

Masturbation.

By masturbation is meant playing with or fumbling the genital organs. This is usually done with the hand or by rubbing the thighs together. When very young infants masturbate they rub their thighs together continuously until exhausted. They become very red in the face, and when restrained become very irritable. When older children masturbate they become very pale and anemic, they are absent-minded and shy, they frequently complain of headaches and have very irritable attacks. This is not always a bad habit but frequently is caused by some abnormality of the genital parts. In such cases nothing but surgical relief will affect a cure. It may be caused by an irritation due to an

elongated or firmly adherent foreskin, or in girls when the skin over the clitoris is adherent. It may also be caused by the presence of worms or if the genital parts are not kept clean. Moral training is useless if any irritation exists which excites this desire, therefore, as soon as this habit is noted the child should receive prompt medical aid. All children should be constantly watched to see if this habit is forming and they should never be permitted to sleep with their hands under the bed clothing.

CHAPTER XII

WORMS

Worms.

AFTER the first year when children receive some solid food in addition to their milk diet they may be troubled with worms. The majority of children seen by me, whose mothers suspect worms, rarely, if ever, have worms. Thread-like worms resembling spool cotton can be plainly seen when examining the rectum. As a rule there is an intense itching which compels the child to scratch. Restlessness at night and loss of appetite are rarely due to worms. It is true that an occasional case may be troubled with worms, but let a physician see the child and let him administer the worm medicine rather than run the risk of giving powerful medicines which are not at all necessary.

Round worms, five or six inches long and brown in color, have been seen by me in young children. About two cases out of one hundred in which worms were suspected have really proven to be worm cases. When tape-worm is present we usually have loss of flesh,

although the child will take a fair amount of nourishment. It is only these tapeworm cases, found in children between six and twelve years of age and requiring careful diet besides expulsive treatment, that need cause any concern. Severe bleeding from the bowel has been seen by me when an anxious mother gave a strong patent tapeworm medicine, thinking that on general principles the child had worms.

If the foreskin is tight and has a pin-point opening it may cause a series of symptoms, among them bedwetting, irritability and insomnia. Such children usually fumble with the parts as there is constant irritation.

In some cases we can widen the foreskin with a dilator. This should only be attempted by a physician. With proper oiling every day relief is frequently given. If this stretching does not give permanent relief from the sleeplessness and the irritability then we must resort to circumcision.

The operation of circumcision is very simple. Many cases of nervousness, such as St. Vitus dance, can be cured by this operation. When adhesions of the foreskin form and there is a contracted prepuce, then circumcision will be demanded.

CHAPTER XIII

EXTERNAL APPLICATIONS, AND THE MEDICINE CHEST

Flaxseed Poultice.

INTO a pint of boiling water stir flaxseed, also known as linseed, until it forms a paste just thick enough to flow from a spoon; add a tablespoonful of sweet oil or glycerin; spread it one-half inch thick between two layers of cheese-cloth; apply where directed and cover with a layer of cotton, warm flannel or oil silk. If the part to be poulticed is anointed with sweet oil or vaselin before the poultice is applied, no blisters will be raised.

Mustard Poultice.

To make a mustard poultice take one teaspoonful of mustard and six teaspoonfuls of wheat-flour, add two teaspoonfuls of sweet oil or glycerin and enough warm water to make it into a thick paste. Spread between two layers of cheese-cloth, and apply to the part directed, after anointing the same with vaselin. This poultice can be left on only a few minutes and when removed the skin should

again be anointed with vaselin or dusted with corn-starch.

To give a mustard foot-bath, tie one table-spoonful of German mustard into a cheese-cloth bag. Let this soak for a few minutes in a foot tub containing two quarts of warm water, temperature 105° F. The feet should be immersed to above the ankles for about two minutes. On removing the feet, place them near a hot-water bottle or wrap them in a warmed towel.

A turpentine stupe is made by adding one-half teaspoonful of spirits of turpentine to one pint of boiling hot water and mixing thoroughly. Dip two thicknesses of flannel into this turpentine and water and wring out until it does not drip. Apply where directed and cover with a large piece of cotton or oil silk.

A pneumonia jacket should be shaped like a baby's sleeveless shirt. A layer of cotton is placed between a layer of cheese-cloth and one of oil silk. The edges are turned in and the three layers basted together. The shoulder seams or straps may be sewed together or tied with tapes. The front is closed by means of tapes sewed on either side. The jacket is worn with the layer of cheese-cloth

next to the skin. Two jackets should be made so as to have a change when one gets moist.

**Hot-Water
Bottle.**

A hot-water bottle should be half-filled with hot water, the air expelled by pressing the empty part of the bag together, and the top screwed on. The bag should then be held upside down to see if the water drips. Draw over the bottle a flannel cover or sew the bottle in a square of flannel.

Ice-Bag.

An ice-bag should be half filled with crushed ice, the air expelled and the top screwed on. If an intense cold is desired a little common salt may be added to the crushed ice. A layer of moist cheese-cloth or cotton should be laid between the bag and the skin, otherwise the extreme cold is painful. If the weight of the bag is uncomfortable to the patient, especially if applied to the head, then the bag may be wrapped in cheese-cloth and pinned to the pillow, so suspended as to barely allow it to touch the head. The bag must be re-filled before all the ice has melted.

**Cold
Compress.**

Cold compresses are made of three or four thicknesses of linen wrung out of cold water and applied where directed. Two compresses should be used, one of which is kept in the cold water while the other is on the patient.

To give a simple enema, ordinary suds are made with castile or glycerin soap and warm water, temperature 100° F. A fountain syringe should be used, to which an infant's size nozzle is attached. Fill the bag with the amount of suds ordered (usually one or two pints) and anoint the nozzle with vaselin. Open the spring clasp on the tube and allow the air and a few ounces of water to escape. Gently insert the nozzle into baby's rectum and allow the water to flow in a slow, steady stream, the bag being held about two feet over the baby's body.

A chamomile injection is made and given in the same manner as a simple enema, only chamomile tea, temperature 100° , made by steeping one tablespoonful of chamomile flowers in a quart of boiling water, is used instead of the soap suds.

The baby should have his own ointments, fountain syringe, etc. These should be kept in the nursery away from disinfectants and poisonous drugs. When the baby travels or when going to the country, a full and fresh supply of all drugs and requisites he is likely to need should be taken along. The following list should be supplied and will meet almost all emergencies:

Castor-oil	Boric acid powder
Sweet spirits of niter	Pure talcum powder
Sirup of ipecac	Eyestone or flaxseed
German mustard (ground)	Absorbent cotton
Chamomile flowers (German)	Cheese-cloth
Alcohol	Gauze and muslin bandage
Witch-hazel	Thermometer
Glycerin	Medicine dropper
Glycerin soap	Medicine glass
Vaseline	Ice-bag
Zinc salve	Hot-water bottle
Bicarbonate of soda	Fountain syringe
	Small glass syringe

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